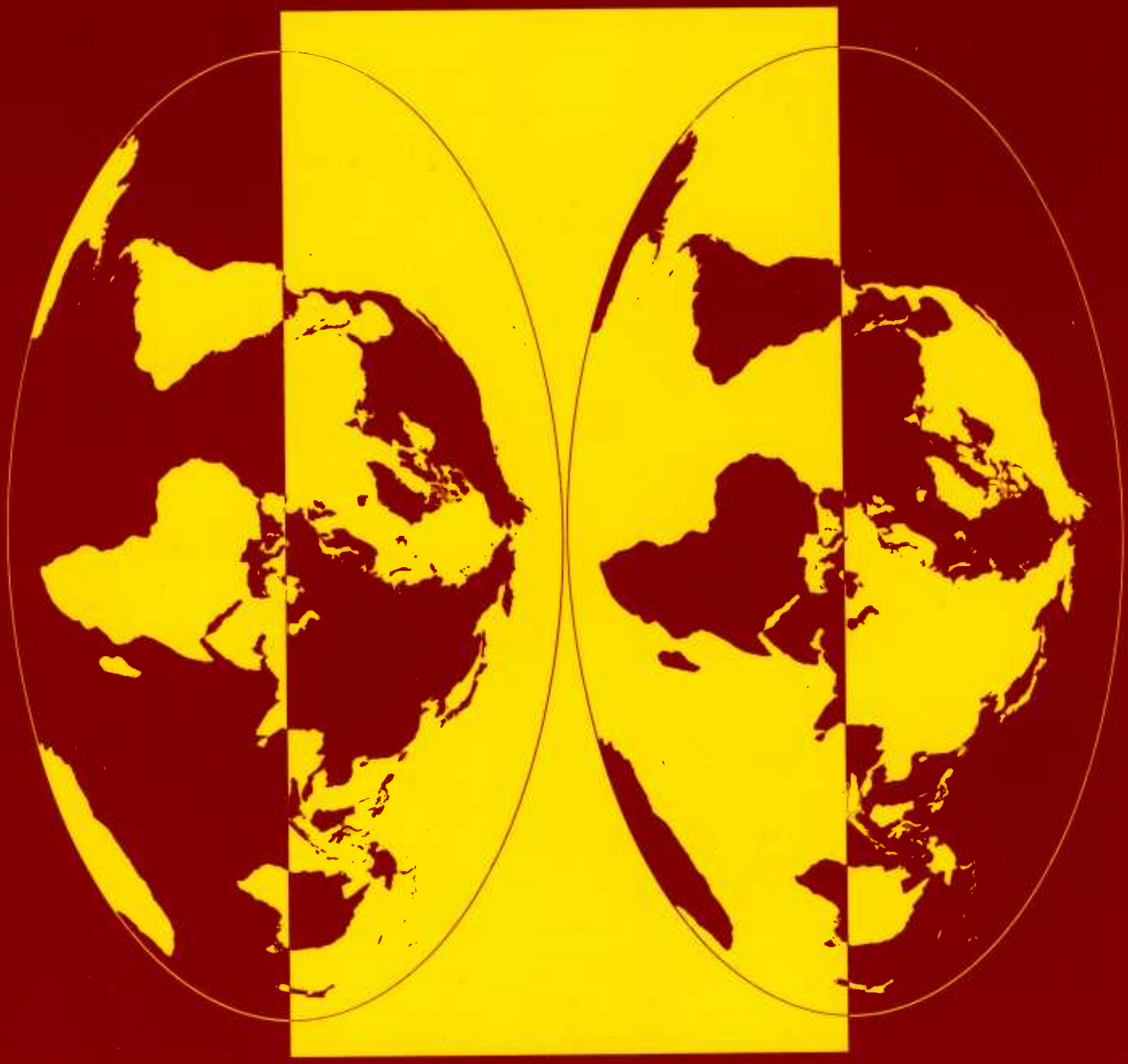
Population Distribution Policies in Development Planning

United Nations



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(Continued on p. 3 of the cover)

(Continued from p. 2 of the cover)

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Department of International Economic and Social Affairs
POPULATION STUDIES, No. 75

Population Distribution Policies in Development Planning

Papers of the United Nations/UNFPA Workshop
on Population Distribution Policies in Development Planning
Bangkok, 4-13 September 1979

United Nations
New York, 1981

NOTE

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The term "country" as used in the text and tables of this publication also refers, as appropriate, to territories or areas.

The designations "developed" and "developing" economies are intended for statistical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process.

The views expressed in signed papers are those of the individual authors and do not imply the expression of any opinion on the part of the United Nations Secretariat.

Papers have been edited and consolidated in accordance with United Nations practice and requirements.

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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PREFACE

In the World Population Plan of Action,[1] substantial attention was given to policy needs and goals in reference to population distribution and migration. The primary role of national Governments, acting with the full support of intergovernmental organizations, was recognized in this area as in other aspects of population and development. An expanded capacity to deal with population distribution problems was also among the priority areas for action identified by the Population Commission at its twentieth session, held from 29 January to 9 February 1979,[2] and approved by the Economic and Social Council in its resolution 1979/32 of 9 May 1979, in connection with the *Review and Appraisal of the World Population Plan of Action*,[3] carried out in 1979.

As a specific step towards the implementation of those recommendations, the Workshop on Population Distribution Policies in Development Planning was convened at Bangkok, Thailand, from 4 to 13 September 1979. The meeting was organized jointly by the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat and the United Nations Fund for Population Activities (UNFPA); it was held at the headquarters of the Economic and Social Commission for Asia and the Pacific (ESCAP).

Commissioned papers, from among which most of those here published were selected, were submitted to the Workshop and were discussed by the entire group. The papers in this volume were further revised by the authors after the Workshop ended.

A policy-oriented review of the issues, based on the reports of smaller panels, each assigned to a specific issue after the general discussion, is to be published by UNFPA.

[1] *Report of the World Population Conference, 1974, Bucharest, 19–30 August 1974* (United Nations publication, Sales No. E.75.XIII.3), part one, chap. I.

[2] See *Official Records of the Economic and Social Council, 1979, Supplement No. 2 (E/1979/22)*, appendix.

[3] United Nations publication, Sales No. E.79.XIII.7.

CONTENTS

Explanatory Notes

The following symbols have been used in the tables throughout the report:

Three dots (. . .) indicate that data are not available or are not separately reported.
A dash (–) indicates that the amount is nil or negligible.
A blank in a table indicates that the item is not applicable.
A minus sign (–) indicates a deficit or decrease, except as indicated.
A full stop (.) is used to indicate decimals.
A slash (/) indicates a crop year or financial year, e.g., 1970/71.

Use of a hyphen (-) between dates representing years, e.g., 1971-1973, signifies the full period involved, including the beginning and end years.

Details and percentages in tables do not necessarily add to totals, because of rounding.

Reference to "tons" indicates metric tons, and to "dollars" ($) United States dollars, unless otherwise stated.

Reference to "billion" indicates a thousand million.

INTRODUCTION

A. Background and purpose

The Workshop on Population Distribution Policies in Development Planning was convened at Bangkok, Thailand, from 4 to 13 September 1979. The Workshop was organized jointly by the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat and the United Nations Fund for Population Activities (UNFPA). It was held at the headquarters of the Economic and Social Commission for Asia and the Pacific (ESCAP).

Participants were invited to the Workshop in their personal capacity and not as representatives of a Government or agency.[1] They represent a wide range of professional experience in research and application as well as in geographical background.

Léon Tabah, Director of the Population Division, represented the Secretary-General of the United Nations at the Workshop. Donald Heisel, Acting Coordinator, World Population Conference Implementation, served as Secretary of the Workshop, as did Ellen Brennan, Population Affairs Officer, Population Policy Section.

Among the priority areas for action identified by the Population Commission at its twentieth session,[2] held from 29 January to 9 February 1979, and approved by the Economic and Social Council in its resolution 1979/32 of 9 May 1979, in connection with the *Review and Appraisal of the World Population Plan of Action*,[3] was an expanded capacity to deal with population distribution problems.

The Workshop on Population Distribution Policies in Development Planning was convened as a specific step towards implementation of those recommendations.

The Workshop considered the following substantive items:

Definition of population distribution goals;

Institutional framework and policy implementation;

Programmes and instruments affecting urban size and urban hierarchical networks;

Programmes and instruments affecting regional and rural population distributions;

Programme evaluation: data and methods.

[1] For list of participants, see annex I.

[2] See *Official Records of the Economic and Social Council, 1979, Supplement No. 2* (E/1979/22), appendix.

[3] United Nations publication, Sales No. E.79.XIII.7.

Significance of the question[4]

A majority of the countries of the world currently consider population distribution their major population problem, exceeding that of fertility and natural growth. The concern with population distribution issues has tended to increase in recent years. A United Nations monitoring report, in comparing the responses of Governments in 1976 with those given in 1974, states that "many Governments were showing increasing concern with the severity of problems associated with an inadequate spatial distribution of population and with the constraints that such inadequacy placed upon achievement of developmental objectives."[5]

Although dissatisfaction with spatial population distribution also exists in many developed countries, it is particularly characteristic of developing countries. In 1976, while 17 per cent of the Governments in more developed regions considered their spatial population distribution to be "extremely unacceptable", 62 per cent of those in less developed regions considered it such; on the other hand, 31 per cent of the countries in more developed regions viewed their distribution as "entirely acceptable", but only 5 per cent of those in less developed regions were so satisfied.[6]

The dissatisfaction with their existing population distribution patterns expressed by the vast majority of developing countries reflects a shared realization of the significant relationship of population distribution to issues of national economic development, social welfare and political stability. The specific types of distribution problems experienced by individual countries are, however, varied. In some cases, the major problem is that of rural areas with excessive population in relation to the resource base, but others have underdeveloped rural areas, often near borders, with an insufficient labour force. Many developing countries have as their major distribution problem a rapidly growing primate city or metropolitan area which continues to attract migrants more rapidly than they can be supported in terms of employment, housing, infrastructure and services. In some cases, cities

[4] This section was prepared by George J. Demko and Roland J. Fuchs, Professor of Geography, Ohio State University, Columbus, Ohio, United States of America; and Professor of Geography, University of Hawaii, Honolulu, Hawaii, United States of America, respectively; and senior consultants to the United Nations/UNFPA Workshop on Population Distribution in Development Planning, Bangkok, Thailand, 4–13 September 1979.

[5] *World Population Trends and Policies—1977 Monitoring Report*, vol. II. *Population Policies* (United Nations publication, Sales No. E.78.XIII.5, p. 73.

[6] Ibid., p. 72.

within the hierarchy, including the largest city, may be too lightly populated or have too small a skilled labour force to attract the desired economic activities. This situation is likely to be found in particular in regional centres, or in small and intermediate-sized cities in general, resulting in spatially unbalanced and economically inefficient urban networks.

In recognition of these perceived problems of spatial population distribution the majority of developing countries have already formulated policies designed to alter migration trends or rural and urban population configurations. In the less developed regions as of 1976, nearly 80 per cent of the Governments had adopted policies to alter migration trends, 69 per cent had policies to bring about an adjustment of rural population configurations (either alone or together with urban configurations) and 46 per cent had policies to adjust urban configurations, either alone or together with rural configurations.[7]

B. Organization of the work

J. B. P. Maramis, Executive Secretary of ESCAP, welcomed the participants in the Workshop and stated that the Governments of the ESCAP region had long been interested in population distribution.

The Director of the Population Division, opening the Workshop on behalf of the Secretary-General, welcomed the participants and gave an overview of the topics to be discussed.

Halvor Gille, speaking on behalf of UNFPA, expressed the commitment of the Fund to make a contribution in dealing with the issues discussed at the meeting.

The Workshop was organized in two successive sections. In the first section, commissioned papers[8] were submitted and were discussed by the entire group. In the second section, the participants were reorganized into smaller panels, each charged with the review of one of the specific issues in the light of the preceding general discussion.

The reports of the panels provide the basis for a policy-oriented review of the issues to be published by UNFPA.

In the present publication, the substantive items before the Workshop have been divided into six parts, each containing the relevant papers.

Part one contains two papers that address issues of population distribution goals. Harry W. Richardson's paper focuses on the problems of defining urban population distribution goals and their expression for purposes of development planning. Akin L. Mabogunje, on the other hand, deals with objectives of and rationales for policies concerned with regional and rural population redistribution.

Major themes running through the discussion were that although population distribution patterns and trends might constitute problems in and of themselves, they more commonly were obstacles to the achievement of one or more national goals, such as economic development, social integration, a decrease in external dependence, development of frontier areas, national security and interregional equity. Thus, distribution goals and policies must take into account the unique conditions of a country, including its size, resource base, participation in the international economy, population growth dynamics, societal structure, governmental organization, development style, culture and history. Further, time horizons for achievement of population distribution goals were usually long. The timing of intervention was important; premature intervention might interfere with development strategies oriented towards efficiency and growth; however, strategies that focused on basic needs and equity might require the earlier possible intervention. Lastly, it was widely agreed that because of interdependency in the settlement system, goals should be multidimensional, referring to the various aspects of settlement and not simply to one element, such as the primate city.

Part two consists of papers considering arguments for and against government intervention. Koichi Mera cautions that government intervention may have consequences that are unintended, undesirable or unduly expensive; and that achievement of economic development as such, without regard for population distribution consequences, may in the long run be the most reliable and efficient way to achieve the objectives sought through population distribution policies. In the following paper, Walter B. Stöhr critically examines the arguments that have been posed against government intervention to influence territorial population distribution and demonstrates that in many instances they arise from rather partial interpretations of the evidence.

In the discussions—as well as in most of the papers—the general consensus was that although serious arguments could be presented against government intervention in population redistribution, the weight of evidence was heavily in favour of such intervention in the developing countries. Among the more compelling reasons for intervention was that Governments were already intervening in spatial population processes through their economic development policies, typically formulated with little attention to their consequences on population distribution. Secondly, the argument that market forces alone would work in the long run to produce a balanced population distribution was unacceptable, given the long time periods required. Because of rapid rates of population and economic growth, and problems of emerging population distribution patterns, developing countries could not afford to wait indefinitely for the uncertain results suggested by market theory. Thirdly, the prevailing population distribution in many developing countries might be regarded as poorly matched to the distribu-

[7] Ibid., pp. 74–75.

[8] See annex II. Most of the papers presented in this publication were selected from the commissioned papers submitted to the Workshop on Population Distribution Policies in Development Planning.

tion of resources; intervention might therefore enhance the development process by bringing about a more efficient use of national space and resources. Fourthly, equity considerations required intervention to remove glaring disparities in incomes and welfare between people and regions. Fifthly, government intervention was necessary to ensure that the distribution of population should agree with the ecological capabilities of the various regions. In many developing countries, existing population distributions might exacerbate adverse ecological consequences.

In part three, the papers treat the population redistribution mechanism and policy instruments employed to affect redistribution. Raúl Urzúa's paper examines current approaches to the redistribution mechanism and suggests a framework for a more holistic approach to redistribution as it relates to different national contexts, including styles of development. Fuchs and Demko compare the range of policy instruments employed in developed countries, both market economies and centrally planned economies, as well as those used in the developing countries, and examine their compatibility with migration "determinants".

Points of broad consensus which emerged in the discussions were that explicit redistribution policies and programmes adopted in developing countries had often yielded only limited success due to incomplete knowledge of the redistribution process, the overriding of the effects of explicit policies by the hidden effects of implicit policies and a failure to employ redistribution measures that were matched to the redistribution process. It might be particularly useful to conceptualize migration in terms of the family as a key decision-making unit; and, at the same time, give attention to the broader impacts of national policies, developmental styles and structural changes.

It was agreed that in the development of redistribution policies and in migration research greater emphasis should be given to differences in migrant characteristics; policies should be framed to distinguish between more successful "active" migrants and the often unsuccessful "passive" migrants. It was also important for developing countries to try to determine the hidden and unintended impact of economic and social development policies upon population distribution. Implicit policies that had undesirable spatial impacts should be re-examined to determine if alternative measures could be substituted to achieve the same development objectives without creating adverse population distribution patterns. It was also observed that for their explicit population redistribution policies and programmes, the developing countries as a whole had already adopted a broad range of instruments, which included incentive and disincentive measures directed towards both employing organizations and individuals or families. Existing policies and programmes emphasized economic incentives and disincentives but most operated only indirectly upon employment and income, and their efficacy had not been established. Service and welfare measures appeared to be overemphasized and measures often failed to incorporate the known effects of distance deterrence, contacts and information, and migration selectivity. Lastly, note was taken that current policies addressed only a few types of mobility and migration (in particular, permanent rural-to-urban migration) and could be substantially broadened in their scope.

In part four, various urban-directed distribution policies and programmes are reviewed and evaluated: Alan B. Simmons examines policies implemented to constrain urban growth; Aprodicio A. Laquian reviews policies designed to accommodate urban growth; Niles Hansen surveys the experience of countries attempting to direct migration to smaller and intermediate-sized cities.

The discussions indicated that urban-oriented policies had, in most countries, dominated population distribution policies. Concerning "closed-city" programmes, there had been some success in slowing in-migration but not in stopping metropolitan growth. Administrative and legal measures employed in such programmes had frequently failed and there had often been unacceptable levels of evasion and corruption. Somewhat more successful had been measures directed towards the limitation of growth in industry or housing.

Urban "rustication" programmes, that is, the movement of urban residents to rural areas, required strong regulation, widespread social and political support, effective administration and integration with rural policies. The true social and economic costs of such programmes, and their impacts on rural development, had not been established.

Slum and squatter settlement improvement programmes, designed to accommodate urban growth, had generally been positively received, although as with many social welfare programmes, they might not reach the very poorest urban residents. It was not yet clear whether they encouraged further in-migration and whether they could be justified in terms of overall welfare and development needs.

Dormitory towns and satellite-city programmes, intended to deconcentrate growth within metropolitan regions, had a mixed record of success. In general, they tended to be expensive and thus to be beyond the capabilities of most developing countries.

Intermediate-sized city or growth-centre strategies, designed to create counter-magnets for migrants and to promote regional development, had generally been less successful than anticipated although some "failures" might be ascribed to the lack of consistent application and the short history of promulgated policies. Because such policies had the potential to accommodate much of the anticipated surge in urban population growth in developing countries, they should not be prematurely dismissed but rather might usefully be re-examined in order to frame more effective policies. The timing of intervention, location of appropriate centres and selection of effective instruments required considerable study and refinement. New town pro-

grammes, it should be recognized, tended to be very expensive and thus not a generally satisfactory solution to urban or regional population problems. With the possible exclusion of new capital cities, which might be required for political integration, investment in existing centres was likely to be a preferable strategy.

Part five similarly reviews experiences with policies and programmes directed towards rural regions and problems. Tunku Shamsul Bahrin examines attempts to channel rural migrants to frontier areas through land colonization programmes; Sally E. Findley reviews and analyses the migration impacts on rural populations of rural development programmes of two types: capital-intensive agricultural programmes; and integrated rural development schemes.

In the discussions, it was observed that sponsored land-settlement schemes had had a mixed record, with failures outnumbering successes. Costs per farmer or family were high but represented in large part the costs of developing a previously underutilized land resource. On a global basis, spontaneous settlement of frontier lands currently accounted for three fourths of new rural land settlement globally and therefore required much more attention. Capital-intensive rural development programmes had often resulted in greater agricultural output and productivity but at the expense of rural income equity and increased rural outmigration. Integrated rural development programmes, which emphasized more equitable distribution of income and employment, had served to increase available migration options which resulted in less rural-rural migration, more commutation and rural-small city migration and various changes in rural-metropolitan migration. Further research on various types of rural mobility (to include non-permanent and return migration) could be very productive; conceivably, such types of mobility might be employed to facilitate the development process.

Part six is devoted to institutional requirements and associated data needs. Robin J. Pryor's paper analyses policy formulation, implementation and monitoring in the context of development planning. Sidney Goldstein examines data needs and research priorities for policy formulation, monitoring and evaluation.

In the discussion, it was recognized that there was no one best or universal set of institutions, departments or ministries for the creation, organization or implementation of population redistribution policies in any given country. The most appropriate institutional framework would depend upon the specific and unique historical, social conditions, political system and level of development of the country involved. Thus, each country might benefit from the experience or knowledge of another but would almost certainly be required to modify or innovate any institution adopted.

One generally important institutional consideration was that population distribution policy formation and planning were so closely related to regional economic development planning and national urban policy planning that it was essential to co-ordinate closely the activities, where the latter functions were already carried out by an existing institution. Where regional economic development or national urban policies and planning did not exist, the institutional framework created for population distribution planning should be expanded to include all those functions.

With respect to data needs, it was agreed that a regular flow of high-quality and timely information was required both for the formulation of population distribution policies and for the evaluation of effectiveness of population redistribution programmes. It was emphasized, moreover, that those data must be well specified in two ways—areally and temporally.

Data, whether on migrants, non-migrants or commuters, and whether economic or environmental in nature, should be carefully specified by locality as determined by the individual migrant or commuter; and further spatially identified by province or state, region and so on up the locational hierarchy. Such data might be then organized so as to be retrievable for any individual unit or set of units at any level of aggregation required.

The nature of the migration process required that it be monitored continuously, not only in census or *ad hoc* surveys but by periodic and more detailed national surveys. If spontaneous and planned redistribution of population could be monitored, policy-makers would gain considerable insight into the efficiency of their programmes and into the nature of migration processes that might be modified to meet their goals.

In general, it was agreed that the data requirements for formulating and continually monitoring and evaluating population distribution policy were substantial. It was clear that the more and better the data, the greater the opportunities would be for setting realistic goals, understanding related spatial processes and, most important, assessing the success or failure of policies in force.

The Workshop was closed by Nafis Sadik, Assistant Executive Director and Chief, Programme Division of UNFPA, who expressed appreciation to all those in attendance.

Acknowledgement is due above all to the participants, both for the papers and for the discussions. In addition, acknowledgement is due to UNFPA (Project No. GLO/78/P32) for the financial support that made the Workshop and this publication possible; and to ESCAP for the efforts and facilities that contributed significantly to the actual meeting. Lastly, recognition is due to the consultants to the Workshop, who contributed to every phase of the activities.

Part One

THE GOALS OF POPULATION DISTRIBUTION POLICY

I. DEFINING URBAN POPULATION DISTRIBUTION GOALS IN DEVELOPMENT PLANNING

*Harry W. Richardson**

A sound starting-point for the issues raised in this paper is the classic analysis of Alonso, in which he makes three critical arguments. First, territorial goals are lower level rather than ultimate goals. In other words, "the objectives of territorial policy are aspects of the common set of national objectives on which all national policy is based, however imperfectly".[1] The key goals of efficiency, equity, environmental quality and higher levels of living (among others) dominate spatial objectives so that the latter are subgoals, at best. Secondly, the spatial dimension is only one of several dimensions of the socio-economic system, and not the most important. Thus, "population distribution is the territorial aspect of a highly connected and interdependent social system, and . . . local variations in welfare and productivity are also aspects of this larger system reflected upon geographic space".[2] This statement implies that the territorial distribution of the population and the economy is the geographical projection of the socio-economic sector. Thirdly, non-spatial policies have major spatial impacts, probably stronger than the influence of explicitly spatial policies. In Alonso's words:

> "Direct policies to modify this geographic distribution have been generally ineffective and sometimes counterproductive because they have underestimated or misjudged the connections among elements of the system along dimensions other than the geographic. Conversely, many policies and public actions whose main thrust is not territorial turn out to have strong geographic consequences which are normally not intended."[3]

The upshot of this cogent analysis is that spatial distribution goals and policies have only a minor role in development planning. The question arises whether Alonso is exaggerating. An important qualification, which may or may not affect the end-result, is that his comments refer to the economy of the United States of America, which, like other advanced industrial economies with low population growth rates, suffers from a high degree of spatial "fossilization". In developing countries, the interaction between spatial transformation and economic and social development is much more simultaneous rather than the former occurrence being dependent upon the latter.

Conroy has recently developed a more optimistic approach to these problems: he defines the optimal spatial distribution of population as "that distribution which contributes most directly to the achievement of specific explicit or implicit development goals".[4] He argues that the key elements for analysing the optimal distribution consist of using the goals of the social system (national, regional and individual); the initial population distribution; the interplay of such institutional factors as pricing and allocation mechanisms, communication flows and the mode of production; and the influence of location with respect to natural resources, production technology and the composition of demand. In particular, he suggests that the optimal spatial distribution will be sensitive to the nature of the economic system; for instance, the optimal spatial distribution under conditions of market-economy allocations may be quite different from that in centrally planned economies.

Conroy uses the income identity given below:

$$Y = \sum_{j}\sum_{k}\sum_{m} \alpha \; \mathrm{j} \; {}_{k\,m} X_k^j - \sum_{i}\sum_{j}\sum_{m} c_m^{ij} M_m^{ij} - \sum_{i}\sum_{j}\sum_{k} t_k^{ij} s_k^{ij}$$

where Y = national income;
α_{km}^{j} = returns to factor m per unit of production in sector k in region j;
X_k^j = output of sector k in region j;
c_m^{ij} = costs of migration of factor m between regions i and j;
M_m^{ij} = migration by units of factor m from i to j;
t_k^{ij} = costs of transporting one unit of output of sector k from i to j;
s_k^{ij} = shipments of output k from i to j.

Thus, he sets up a maximization problem subject to constraints on regional factor supply and regional demand. He considers several variants of the objective function, such as the maximization of income, or em-

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[1] William Alonso, "Problems, purposes, and implicit policies for a national strategy of urbanization", in Sara Mills Mazie, ed., *Population Distribution and Policy*, vol. V of Research Reports of the United States Commission on Population Growth and the American Future (Washington, D.C., Government Printing Office, 1972), p. 638.

[2] Ibid., p. 636.

[3] Ibid., p. 645.

[4] M. E. Conroy, "The role of large cities in third world development: a putative reappraisal", paper prepared for the Twenty-fifth Anniversary Meeting of the Regional Science Association, Chicago, Illinois, November 1978, p. 2 (mimeographed).

ployment or profits. He discusses such possibilities as the guaranteed equalization of factor returns across regions, the imposition of a national balance of payments constraint, equalization of interarea per capita incomes or environmental constraints on production. He shows that the optimal distribution of output and population concentration varies according to the way in which the objective function and the key constraints are specified. Because this specification reflects characteristics of the economic and social system considered, it follows that:

> ". . . the optimal location of the population to pursue the collective goals of the individual members of that population cannot be postulated in isolation. It must be related to, or derived from, the full interplay of social goals, technical possibilities, and the forms of institutional organization which have been developed to mediate the tension between possibilities and goals."[5]

Although some of the implications of different institutional and policy goal assumptions are quite obvious, others are not. An example of an obvious implication is that if there are agglomeration economies in production, the optimal degree of population concentration would be greater under profit maximization than, say, under income equalization. However, in the latter case, it might still be better for society to adjust by changes in the factor-pricing mechanism (e.g., institutional controls over wages and profits) than by relocation of productive capacity.[6]

A difficulty with Conroy's analysis is that it leads to indeterminancy. In comparing two sets of background conditions and institutional frameworks, it may be possible to deduce that the optimal population distribution is more concentrated in one case than the other but this is far from determining what the optimal spatial distribution should be. The conversion of general societal goals into a supportive spatial outcome is complex, and it is very difficult to test whether this outcome is close to optimality. This difficulty reflects the very high data requirements for putting the proposed model into operation. Most of the variables are sector-specific and region-specific. Moreover, since any measure of optimal population distribution must be sensitive to size-class differences among lower levels of the urban hierarchy and to the heterogeneity of rural areas, the degree of spatial disaggregation needs to be very fine (i.e., a large number of regions). The information required to implement a model of this kind is beyond the data-base capacity of most developing countries.

It is interesting that among several objectives of a national settlement strategy suggested by Renaud,[7] only one necessarily implies changes in the population distribution. His list of objectives includes: (*a*) integration of peripheral regions in the national space economy to increase the size of national domestic markets and to raise national output by exploiting new resources; (*b*) the narrowing of interregional disparities (but not as a substitute for efforts to reduce interpersonal inequities); (*c*) the development of border regions for national security motives; (*d*) the improvement of political integration and social cohesion; and (*e*) changes in the national urban system to improve its efficiency as a diffusion mechanism. All these objectives, excluding the last named, could be pursued without attempts to change the national settlement pattern, although efforts to promote certain cities (either on an individual or a size-class basis) have usually been related to regional development goals rather than to a concern with the city-size distribution as a diffusion system.

Of course, it may be possible to think of other spatial objectives not considered by Renaud. But the point is clear. Population distribution goals are frequently not a critical issue. Where they are specified, they tend to be poorly articulated in the form of generalizations about controlling the growth of the primate city or stabilizing the settlement pattern in rural areas. Furthermore, such objectives are rarely considered in the broader context of national development planning. Their consistency with, or more often contradiction to, macro and sectoral goals is rarely explored. Also, spatial planners are frequently relegated to the back rooms or the basement of the national planning agency and are not a party to the major planning decisions. Of the three main policy issues identified by Renaud, namely, the impacts of implicit spatial policies and the spatial discriminatory effects of national "non-spatial" policies, the externalities associated with large cities, and the problems associated with regional disparities, the third issue has received most of the attention but the first is probably the most critical. Thus, it is futile to give much attention to formulating population distribution goals while efforts to achieve these goals are negated by the unacknowledged impacts of national macro and sectoral policies on the settlement pattern. The implication of this observation might appear to be the integration of national settlement planning with national economic planning in general, but as is suggested below, this undertaking is exceedingly difficult, especially in a mixed economy, as opposed to a centrally planned economy.

A. Heterogeneity of countries

Table 1 presents some indicators of population distribution for selected developing countries. Apart from the data on gross national product per capita (column 1), which is used as a proxy for the level of development, all the variables shed light on some aspect of the spatial distribution of population. Columns (2) and (3) compare the growth rates of total population and urban population in each country over the period 1970-1975. Column (4) shows the population of the largest city; in column 5, this figure is expressed as a percentage of the urban population, which is a type of primacy

[5] Ibid., p. 15.
[6] Ibid., p. 26.
[7] Bertrand M. Renaud, *National Urbanization Policies in Developing Countries* (Washington, D.C., World Bank, 1979).

TABLE 1. POPULATION DISTRIBUTION INDICATORS

Country	Gross national product per capita (dollars) (1)	Total population growth rate, 1970–1975 (2)	Urban population growth rate, 1970–1975 (3)	Population of largest city (thousands) (4)	Overall primacy index (5)	Four-city primacy index (6)	Net migration/ urban growth share (7)	Urban rural growth differential (8)
Saudi Arabia	4 480	2.4	6.3	667	23	0.58	0.619	4.43
Venezuela	2 570	3.1	3.9	2 673	27	1.23	0.205	5.90
Iran	1 936	2.8	4.7	4 435	30	2.34	0.404	2.59
Argentina	1 550	1.3	2.0	8 436	46	1.55	0.350	3.18
Iraq	1 390	3.3	5.0	3 433	50	1.99	0.340	4.18
Brazil	1 140	2.9	4.5	9 965	15	0.81	0.356	3.89
Mexico	1 090	3.5	4.6	11 943	29	2.63	0.239	3.37
Chile	1 050	1.8	2.7	2 850	36	4.82	0.333	4.27
Egypt	1 001	2.2	3.9	6 932	39	1.64	0.436	2.66
Turkey	990	2.5	4.2	3 255	19	0.98	0.405	4.11
Algeria	990	3.2	5.7	1 179	14	1.25	0.439	5.35
Cuba	860	1.8	2.9	2 269	39	1.46	0.379	1.56
Malaysia	860	2.7	4.7	452	16	0.69	0.426	1.96
Peru	800	2.9	4.2	3 901	45	3.38	0.310	2.59
Syrian Arab Republic	780	3.3	4.2	1 053	32	0.86	0.214	1.72
Republic of Korea	670	1.8	4.9	7 286	45	1.54	0.633	5.71
Colombia	630	2.8	4.9	3 416	21	1.09	0.429	4.08
Morocco	540	2.4	5.1	1 856	28	1.26	0.529	3.29
Zambia	440	2.9	6.8	448	30	0.57	0.574	6.38
China	410	1.7	3.3	10 888	6	0.76	0.485	3.79
Philippines	410	2.8	4.8	4 444	28	0.75	0.417	1.38
Bolivia	390	2.7	4.0	655	33	1.18	0.325	2.08
Thailand	380	2.9	5.3	3 277	47	14.59	0.453	1.99
Nigeria	380	2.5	7.0	2 064	18	0.63	0.643	2.60
Sudan	290	2.1	5.5	803	33	0.53	0.618	2.55
Indonesia	240	2.4	4.7	5 593	21	1.34	0.489	2.32
Kenya	240	3.5	6.3	699	49	1.68	0.444	3.11
Sri Lanka	200	1.7	4.3	655	19	—	0.605	2.57
United Republic of Tanzania	180	2.7	7.5	517	50	—	0.640	2.89
Pakistan	170	3.0	5.3	4 465	24	0.97	0.434	2.68
Afghanistan	160	2.2	5.4	749	25	0.67	0.593	3.27
India	150	2.1	3.8	8 077	6	0.67	0.447	1.11
Zaire	140	2.7	6.4	2 088	32	4.05	0.578	8.82
Burma	120	2.2	4.8	2 449	35	1.88	0.542	3.03
Bangladesh	110	2.0	3.8	1 918	31	1.14	0.474	1.79
Viet Nam	—	2.6	4.6	2 046	—	1.63	0.435	2.65

Source: Compiled from data given in Bertrand M. Renaud, *National Urbanization Policies in Developing Countries* (Washington, D.C., World Bank, 1979).

index. The more familiar four-city primacy index (the ratio of the population of the primate city to the combined population of the next three largest cities) is presented for comparison purposes in column (6). Column (7) gives a surrogate for the contribution of net migration to urban growth, measured by the ratio of the difference between the urban growth rate and the national population growth rate to the urban growth rate.[8] Lastly, column (8) shows the difference between the rates of urban and rural population growth, which is a reasonably acceptable indicator of the speed of urbanization.

Any stratification of these countries by level of development is arbitrary but four categories seem reasonable. A top income group (a range from $4,480 to $1,390) of five countries (Saudi Arabia, Venezuela, Iran, Argentina and Iraq), four of which are major oil producers, is the least convincing because in Saudi Arabia—and, to a lesser extent, in Iran and Iraq—there exist, despite their oil, low levels of socio-economic development. The second group (in the range from $1,140 to $780) comprises 10 countries, mainly (excluding Malaysia) in Latin America and in Northern Africa and Western South Asia. The third group consists of nine countries, which are very diverse geographically and in which the gross national product per capita varies between $670 and $380. Twelve countries with gross national product per capita below $300 compose the fourth group.

The important point is that there is no discernible regularity in spatial distribution patterns within groups stratified according to level of development. Each group contains primate and non-primate city size distributions (Iran and Saudi Arabia, Chile and Malaysia, Thailand and Nigeria, Zaire and the Sudan being the extremes, according to the four-city index). The urban/rural growth differential is similarly randomly

[8] This ratio is only a proxy. It implicitly assumes that no difference exists between rural and urban areas in fertility and mortality rates, that urban annexation and the redrawing of urban boundaries have no significant impacts and that the variation among countries in the minimum threshold urban size does not affect the results.

distributed, although all the countries but one (Cuba) with a gap of less than 2.0 are in Asia, and the two countries with the largest gap are in Africa (Zambia and Zaire). These data reflect the predominantly rural but stable settlement patterns characteristic of many countries in Asia and the rapidly urbanizing but still heavily rural societies common in Africa. The countries vary dramatically in the extent to which net migration (as opposed to natural increase) contributes to urban growth. In this respect, the extremes are Mexico, the Syrian Arab Republic and Venezuela (low migration contributions, less than 0.25); and Nigeria, the Republic of Korea, Saudi Arabia, Sri Lanka, the Sudan and the United Republic of Tanzania (high contributions, more than 0.6). For obvious reasons, the net migration contribution is positively associated with the urban growth rate, but there is no discernible relationship between this contribution and the indices of primacy or urban/rural growth differentials. Apart from the expected finding that the urban growth rate exceeds the overall population growth rate in all the sample countries, there is no marked pattern in the urban/total population growth rate gap. The gap may be either small in both the slowly growing (Argentina) and the rapidly growing (Mexico and the Syrian Arab Republic) countries or large (compare the Republic of Korea and the Sudan with Kenya and Zambia). Lastly, there is no clear relationship between the size of the primate city and its urban population share. Large primate cities account for a small proportion of the urban population in Brazil, China and India, but a large proportion in Argentina, Egypt and the Republic of Korea. Conversely, the urban population share of small primate cities (over 1 million) exhibits a wide spread, from 0.19 in Sri Lanka to 0.50 in the United Republic of Tanzania.

These observations could be extended, but it is unnecessary. Examination of a variety of population distribution indicators reveals considerable heterogeneity, with no observable regularities either by level of development or by geographical region. The absence of any systematic relationship between these measures and development indicators is disturbing from the point of view of those who believe that population distribution goals are critical to development planning, because empirical observation appears to offer no general guide-lines as to how particular population distribution patterns may favour or inhibit development. This finding does not rule out the possibility of favourable or inhibiting spatial distributions, but it implies that this question has to be raised in the specific context of an individual country—and probably in terms of the economic and social dynamics of that country. A specific population distribution pattern may favour development in some cases but inhibit it in others. Cross-sectional analysis on the world level does not appear to help very much.

The scepticism expressed in this paper concerning the value of population distribution goals should not be interpreted as implying that national spatial strategies in developing countries are unjustified. On the contrary, such strategies are often very useful, provided that they are kept in their place. That is, they should be flexible, in the sense of changing the settlement pattern in desired directions rather than being firmly committed to a set of specific population distribution goals. They should also be tailored to the peculiar economic, social and geographical characteristics of the individual country. The size of the country is an important variable because strategies for large countries (e.g., Brazil and India) must be very different from those adopted in small countries (e.g., Singapore and the countries in the Caribbean and Middle America regions in general). The political system is also a relevant influence, as a strong federal structure tends to favour the promotion of a sizeable number of regional metropolises (provincial/state capitals), while economic decentralization (and hence spatial dispersion of economic activity) is difficult to achieve with a highly centralized political structure.[9]

B. Optimal city size

The theory of optimal city size is of no value to policy-makers in developing countries. So many unrealistic assumptions are required to construct a model that generates an optimal city size where marginal benefits equal marginal costs[10] that it is dangerous to derive any policy implications from the analysis. In any event, the concept is non-operational because many of the costs and benefits are not quantifiable in terms in which they can be aggregated. Moreover, an efficient size for a city depends upon its role and functions. Cities are stratified into hierarchies, and each size class in the hierarchy supports the others by means of a pattern of specialization in goods production and service supply. A settlement pattern of equal-sized cities would be very inefficient because the smaller size of each city would rule out the exploitation of scale economies in the production and delivery of high-order goods and services.

Even in the case of the heavily congested primate city, arguments as to optimal city size are of limited relevance. The appropriate policy prescription is not to reduce its size but to improve its efficiency by spatial reorganization and better management; this strategy helps to reduce congestion costs while salvaging the agglomeration economies on which the pri-

[9] The discussant (Luis Unikel) made the important point that the political structure is critical in a different sense. In developing countries, the failures of spatial planning are not primarily due to technical limitations. Planning is a political process; and the State is not neutral, either politically or economically. In many cases planning programmes have failed because they were intended to fail, or rather were intended to generate merely token successes. The explanation for this situation is that real success would have tended to undermine the power élite and its privileges. Whatever the limitations of such an approach, this paper takes the institutional framework and the political system as given.

[10] William Alonso, "The economics of urban size", *Papers and Proceedings of Regional Science Association*, vol. XXVI (1971), pp. 67–83; Harry W. Richardson, *The Economics of Urban Size* (Lexington, Massachusetts, Lexington Books, 1973).

mate city is based.[11] In many developing countries, there may be a strong case for slowing down the growth of the primate city; this case, however, rests not on the theory of optimal city size but on a complex variety of grounds, such as facilitating long-run national economic development, promoting interregional equity and providing a more favourable environment for national spatial (and political) integration. Also, as is argued below, the primate city may have a short-run absorptive capacity problem where metropolitan policy-makers have difficulty in expanding public services to keep pace with the growing population; but this is a problem of adjustment, not of absolute size.

C. The primate city in population distribution goals

The deceleration of the growth of the primate city is almost a universally proclaimed goal in developing countries, regardless of whether the population is 10 million or 500,000. As the justification must vary in these two extreme cases, with a tendency to weaken when the primate city is very small and accounts for only a small proportion of the urban population, the unanimity of this goal reflects imitation and the herd instinct more than a rational response to analysis of the specific problems of each country. Nevertheless, policy-makers usually have little difficulty in producing reasons that primate-city control should have a dominant place among population distribution goals. It may be consistent with efficiency if production costs are rising more rapidly than elsewhere due to congestion effects. It may promote equity by dampening the forces making for land speculation (and regressive intrametropolitan transfers) and by redirecting infrastructure investment (and hence service provision) to smaller towns and/or rural areas. It may reap major political gains by reducing the vulnerability of a metro-dominated political system to a take-over by a neglected rural sector. It may improve (or at least moderate deterioration in) environmental quality for primate-city residents by relieving the pressures associated with rapid in-migration into a city already strained to capacity in housing, transportation, public services and social facilities.

The emphasis on the conditional "may" in the preceding paragraph is not accidental. Any increase in production costs due to congestion may be swamped by the many agglomeration economies that the primate city has to offer. Furthermore, although the association between high growth rates in gross national product and increasing primacy demonstrated by Mera[12] may be subject to methodological qualifications, it made a case which no one (to the present author's knowledge) has attempted to answer. The equity arguments are open to attack from many directions: the primate city contains large numbers of very poor people who may suffer as a result of redirection of investment or other growth-control measures; the main beneficiaries from growth-promotion policies in other areas may be land-owners and businessmen; and if migration to the primate city is controlled, directly or indirectly, scores of thousands of low-income persons might be denied opportunities for self-betterment. The political benefits apply in some cases but not in others. In some parts of the world, placating the metropolitan élites, on the one hand, and the urban masses, on the other (e.g., by refusing to increase food prices) may win more points than redistributing resources to the rural areas. In any event, the short-term threats of *coup d'état* or urban riots may carry more weight than the vague and distant long-term danger of a rural revolution. The impact of in-migration rates on the quality of life is dubious, as most of the migrants and the existing urban poor have no access to most urban services and hence there is little question of their contributing to excess effective demand for services.

Thus, the arguments for controlling the growth of the primate city may apply in some circumstances but not in others. Much depends upon the specifics of the individual case. Suppose, however, that the arguments for it are compelling. Two other problems then arise: the manner in which the general objective of slowing down the growth of the primate city is converted into a more precise goal that is relevant for planning; and secondly, once such a goal has been determined, the policy measures that are available for achieving it.

Targets for reducing the growth of the primate city may be expressed in a variety of forms including: absolute population size; share of the urban (or total) population; an index of primacy; net in-migration rate; population growth rate in relation to other cities in the national urban system; growth rate in gross urban product (if such statistics are available); and employment growth. However, in most cases (and especially with the demographic targets, which are the most easily measured) it is difficult to relate these targets to general development objectives. One may take, for example, city size. The choice of any particular number is arbitrary as it is impossible to quantify any difference in efficiency (or other criterion) between two specific city sizes.[13] Quantitative targets relating to the size of the primate city are primarily justifiable in psychological terms, as goals at which to take aim, with no particular meaning assigned to either a hit or a miss. If it is not possible to spell out all the implications of a specific primate-city size/growth target, policy-makers can never know whether they are intervening too much or too little. It would thus be impossible to judge whether intervention is cost-effective, which would make it difficult to allocate the appropri-

[11] This recommendation has two drawbacks. First, improving the spatial efficiency of the primate city may make it more attractive to migrants. Secondly, a strategy of reducing congestion costs while preserving agglomeration economies may have adverse income distribution effects, especially if it is believed that net agglomeration economies are internalized in land values and if land is privately owned.

[12] Koichi Mera, "On the urban agglomeration and economic efficiency", *Economic Development and Cultural Change*, vol. 21, No. 2 (January 1973), pp. 309–324.

[13] H. W. Richardson, op. cit.

ate amount of resources to spatial as opposed to non-spatial policies.

Leaving aside the arbitrary status of any quantified goal for controlling the primate city and assuming that such a goal has been specified, several types of measures are available to pursue it. Policies to control migration directly either by the direction of labour or by the prohibition of relocation have little appeal outside a collectivist society, although indirect measures to influence migration may be useful. Such measures include action to improve conditions in origin areas and to reduce the attractiveness of the primate city. The first strategy implies a wide range of policies to raise incomes in rural areas,[14] to improve services and accessibility for the rural population and to provide off-farm jobs for agricultural workers. The second implies measures to restrict employment growth in the primate city, either through direct controls on new plants and expansions or through policies on the location of industry, and to reduce its infrastructure and services superiority. Because job creation influences migration in developing countries more than the quality of services and social infrastructure, controls on employment growth may be the most critical spatial-policy option. Unfortunately, they are often difficult to implement effectively on political grounds (e.g., interlocking relationships between government officials and business or fear of frightening away foreign investors).

D. Lower ranks of the urban hierarchy

In general, too much emphasis has been given in developing countries to population distribution goals relating to the upper end of the urban hierarchy. Perhaps the more interesting issues arise at the lower end of the urban hierarchy, at the interface between urban and rural areas. The lower order urban centres serve many functions: for the provision of urban and social services to the rural population; as locations for daily or periodic markets for agricultural produce, food and household goods; and as locations for agricultural support facilities, such as repair shops for agricultural implements, warehouses for storing agricultural products and transport terminals for shipping agricultural goods. These centres should be linked with one another and with the rural hinterlands by a dense secondary-road network, where the farm-to-market roads, in particular, double up by providing accessibility to urban services to the rural population as well as delivering produce to the market. Furthermore, because the market centres are linked with larger towns higher in the hierarchy, they offer some prospect for functioning as nodes for the diffusion of development downward. In this way these centres might further the spread of social and cultural change which might induce more of an orientation towards development among the rural population. As far as the flows of goods through the urban hierarchy are concerned, there is often asymmetry. Agricultural produce flows out of the market centres into all other urban size classes (from the primate city to small towns) as well as to rural areas; urban goods, on the other hand, often flow only out of the primate city, with few flows of urban goods out of other towns. Thus, the medium-sized towns in this situation are not fully integrated with the urban settlement pattern—or rather their production-trade relationships are distorted since they supply only services and not goods downward. Without strengthening these towns, the urban hierarchy may develop a dualistic pattern, with the primate city and a few other major cities forming one subhierarchy, and the lowest order urban centres forming another, but with minimal interconnection between the two.

This brief discussion suggests two additional possibilities for intervention in the urban settlement pattern: the promotion of medium-sized towns to strengthen the linkages among the ranks of the urban hierarchy; and the building-up of the smallest urban centres as a stimulus to rural development. With respect to the latter possibility, market centres typically expand in response to vigorous localized rural development rather than stimulate it. Also, it is unclear whether these small centres should concentrate on supplying services or should also act as generators of off-farm job opportunities. With the increasing emphasis on employment creation as a planning goal, the latter function is important. But off-farm jobs in the small market centres are likely to be service jobs or jobs in home-based cottage industries, rather than employment in rural manufacturing. In fact, many rural industries are quite large scale and require sizeable labour forces; hence, they are located in or near large or medium-sized towns. As for the service functions of the small urban centres, private goods and services are often supplied more efficiently and in greater abundance than public services. This situation reflects the low standards of public services prevailing in rural areas and the resource constraints on expanding capacity. Given these resource constraints, public services can be supplied at minimum cost only by delivering them by means of a hierarchy of service centres involving the concentration of some types of service in centres above the minimum size. A good illustration of the interdependence between spatial and non-spatial goals is that a commitment to diffusing health, education and social welfare services to the rural population will involve building up the very small towns in the urban hierarchy as supply points.

E. The Pareto distribution and optimality

As is well known, the distribution of city sizes can be described in terms of a single statistical coefficient, for example, the Pareto distribution:

[14] Urban-urban migration may be as important as rural-urban migration. However, migration up the urban hierarchy is very often the second stage of a two-stage move that began in the rural areas.

$$N(\bar{P}) = AP^{-\alpha}$$

where $N(\bar{P})$ = cumulative percentage of cities above a threshold size, $\bar{P}$;
P = city size;
A = a constant;
α = the city-size distribution coefficient.[15]

Thus, the value of the coefficient (α) sheds light on characteristics of the city-size distribution. It is a neat descriptive device (about as useful as the density gradient for describing intra-urban population distributions), but little more than that. The threshold urban size varies widely among countries because of differences in urban area definitions; therefore, standardization (which implies adopting the highest threshold size from the sample of countries studied) is necessary before intercity comparisons can be made. From the point of view of describing the population distribution of a country, the restriction of urban areas (particularly those above a high threshold size) is very limiting, since many policy concerns about spatial distribution relate to settlement patterns in rural areas on which the coefficient (α) yields zero information. It is true that certain inferences may be drawn from particular values of that coefficient. For instance, a high value (e.g., $\alpha > 1$) typically implies the dominance of a primate city (or a few large cities), whereas a value substantially below unity suggests a national urban system where secondary cities tend to be relatively large.

In some of the earlier work on distribution of city sizes, it was occasionally suggested that a coefficient value of unity had some special significance, implying a more or less optimal city-size distribution. Of course, this suggestion is nonsense. It is impossible to say anything about optimality if the size distribution is considered in isolation from the spatial and locational aspects of settlement. For example, the city-size distribution coefficient (α) is very sensitive to the size of country, since a very small country is likely to have only one large city with few other major urban centres, and its primate city market area may easily cover the entire country. Conversely, a spatially large country tends to need more than one major city to deliver the highest order services to all parts of the national territory. It is difficult to infer anything useful from city-size relationships unless interurban distances (both within and among size classes) are considered. Despite the formulae to compute "ideal" or "theoretical" distances,[16] actual distances will be markedly influenced by geographical differences in the location of natural resources, topography and rural population densities.

The idea that a coefficient (α) value close to unity is desirable is presumably based on the argument that a regular national urban hierarchy (regularity being defined in terms of a steady increase in the number of cities in any size class with decreasing city size) is efficient from the points of view of diffusing development downward from the primate city and of delivering services of different orders (including national and regional government services) to the national population. However, even if this were the case (and there are doubts[17]), its relevance to the concept of optimal spatial distribution depends upon the assumption that efficiency, as measured by the contribution of the speed of diffusion to the rate of economic development and by the costs of providing the whole range of urban services, is the dominant policy goal. Another measure of efficiency—say, the maximization of gross national product in the short run—might require a much higher city-size distribution coefficient. Alternatively, societal goals stressing equity rather than efficiency might require a more dispersed pattern of urban settlements, implying a much lower coefficient. It is possible to imagine two countries, with the same city-size distribution coefficient but different policy objectives, where a shift towards optimality might call for an increase in that coefficient in one country and a decline in it in the other. As is suggested above, it is impossible to discuss an optimal population distribution, let alone determine such a distribution, outside the context of an analysis of the general (i.e., non-spatial) goals of a society. Moreover, there is no direct correspondence between a set of accepted goals and any particular distribution of city sizes, as measured by the city-size distribution coefficient. There is no target or desired value of that coefficient.

A high value may be appropriate in some economies, while a low value is appropriate in others. In either event, the most critical aspects of the national population distribution are not reflected in the coefficient (α) or similar measures of the city-size distribution.

F. Polarization reversal

The term "polarization reversal" may be used to represent the turning-point when polarization trends in the national economy towards the primate city give way to dispersion.[18] This may happen at a certain level of development when the "backwash" effects of resource movements (including migration) into the core region begin to be outweighed by increasing spatial diffusion of technical knowledge, by a rising demand

[15] The Pareto distribution is very similar to the rank-size distribution

$$R \cdot p^q = K$$

where R = city rank and K = a constant, since this equation implies that $R = Kp^{-q}$ which is the same as the Pareto except that rank is substituted for $N(\bar{P})$. Also, the lognormal distribution $N = \log P$ may be converted into a Pareto distribution by either assuming a threshold city size or estimating it through use of a three-parameter distribution.

[16] L. Curry, "Central places in the random spatial economy", *Journal of Regional Science*, vol. 7 (1967), pp. 217–238; August Lösch, *The Economics of Location* (New Haven, Connecticut, Yale University Press, 1954).

[17] For a critique of the hierarchical diffusion model, see Allan Pred, *City-Systems in Advanced Economies: Past Growth, Present Processes and Future Development Options* (New York, Wiley, 1977).

[18] Harry W. Richardson, "City size and national spatial strategies in developing countries", World Bank Staff Working Paper, No. 252, Washington, D.C., 1977.

for complementary goods produced in lagging regions; and by the setting-up of branch plants made viable by the expanding size of dispersed markets, lower input costs (especially of labour), interregional transportation improvements and mobile external economies.

The identification of the onset of polarization reversal is important for spatial policy-makers. The prospects for successful decentralization strategies are increased if policies are implemented close to the time when polarization reversal begins rather than when polarization forces are still strong. This statement does not imply that spatial decentralization policies are useless in early phases of development when spatial polarization is intense, but it suggests that only marginal gains should be expected from premature intervention. Moreover, the efficiency cost of such intervention may be very high.

An interesting question is the way in which polarization reversal might be measured. Two possible indicators are a change in the degree of regional concentration of industry in favour of greater dispersion and a persistent tendency for secondary cities located outside the core regions to grow more rapidly than the primate city. A study of the Republic of Korea[19] suggests: (*a*) the convergence of regional growth indicators; (*b*) a declining share of gross national product produced by the primate city; (*c*) the narrowing of interregional and interurban income differences; (*d*) a shift in migration flows away from the primate city; and (*e*) a weakening of the positive association between city size and income.

It has been argued that the concept of urban absorption capacity should also be considered in the analysis.[20] The key question facing spatial policy-makers is not merely whether particular cities in the national urban system are suffering from population pressure (as evidenced by a very rapid rate of population growth). The other side of the coin is the absorptive capacity of each city, which may be limited by any of three constraints: the number of jobs; the availability of housing; and the provision of public services. Migrants should be directed towards those cities where absorptive capacity is high in relation to population or where policy instruments can increase absorptive capacity more than population. This action might even imply stimulating further growth of the primate city. However, given the pressures on public services and housing that exist in most primate cities, the policy prescriptions will usually be consistent with some kind of decentralization strategy. The significance of this argument in the context of polarization reversal is that it relieves the policy-maker from focusing primarily on the spatial development phase when polarization reversal begins to take hold. An attractive feature of the analysis is that it reconciles interurban and intra-urban policies, since interurban measures focus on population distribution (and relative population pressures) whereas intra-urban measures are primarily directed towards increasing the absorptive capacity of cities.

The weakness of Linn's thesis is that the concept of urban absorptive capacity is much easier to grasp in theory than to put into practice. Because migration and job creation are closely related, attempts to increase urban absorptive capacity through job creation have complex feedbacks on population pressure by inducing new migration, often with a substantial multiplier effect (e.g., as in the Todaro model). The elasticity of supply of housing is very high as a result of squatting and self-help housing, and it is difficult to see urban expansion in developing countries constrained by housing pressures. Similarly, congestion in the use of public services—although a major diseconomy—is unlikely to dissuade in-migration, simply because the gap in public service standards per capita between urban and rural areas is unbridgeably wide. If absorptive capacity is difficult to specify, spatial policy-makers are left with the very general, and familiar, prescription that it is insufficient to guide migration without taking action to increase public service investments and new jobs in the selected destination cities. This point, in turn, raises questions about the opportunity cost of these investments and job creations, which leads back to the issue of polarization reversal, i.e., to the question concerning when the social returns from dispersion rise towards parity with the social returns from polarization. Unless these comparative returns are close, the efficiency costs of a decentralization strategy may be too high. The urban absorption approach does not free the spatial planner from the fetters of resource constraints and the fact that productivity varies with location.

The implication of polarization reversal analysis for defining population distribution goals is that what constitutes a set of feasible goals is very sensitive to the existing level of spatial development. In a country where polarization tendencies remain very strong, it would be naïve to propose population distribution objectives consistent with a rapidly dispersing settlement pattern. On the other hand, if there are signals that market forces are beginning to favour dispersion, quite ambitious population distribution goals may become feasible. If spatial policies are to be accepted as a serious component of national policy, it is important that population distribution goals should be achievable. If such policies consistently fall short of targets, they will, sooner or later, be discredited.

G. Rural/urban balance

In discussions of population distribution goals, the concept of "rural/urban balance" arises again and again. Unfortunately, its precise meaning is nebulous; and sometimes it refers to variables not directly related

[19] Bertrand M. Renaud, "Economic structure, growth and urbanization in Korea", paper submitted to the Multidisciplinary Conference on South Korean Industrialization, Honolulu, Hawaii, 1977.

[20] J. F. Linn, "Urbanization trends, polarization reversal, and spatial policy in Colombia", paper submitted to the Fourth Advanced Institute in Regional Science, University of Siegen, Federal Republic of Germany, 1978 (mimeographed).

to the distribution of population. Also, even when clearly defined, the concept is difficult to make operational as a goal of development planning.

Many definitions of rural/urban balance are in terms of demography. An extreme case is that of zero rural-urban migration. This possibility is almost as absurd as it is impractical; given higher rural fertility rates, it would imply a fall in the level of urbanization over time. A more moderate version on similar lines is a slow-down in the migration rate from rural to urban areas. The problem then becomes how to identify what migration rates are consistent with an operational definition of rural/urban balance. One possible approach is to relate migration rates to goals associated with urban/rural income differentials. A limiting case is equilibrium between rural and urban per capita incomes. Not only is this not feasible, but even if it were possible it would require a dramatic acceleration in rural-urban migration rates. In general, there is some inconsistency between a definition of rural/urban balance stressing lower migration rates and one emphasizing rural/urban per capita income convergence.[21] An exception is if new migrants to the city join a depressed underclass with incomes lower than those prevailing in rural areas; this case is quite rare, even though the individual gains from migration are much lower than commonly believed.[22]

Nevertheless, income and welfare convergence goals between the rural and the urban sectors are likely to feature in most acceptable definitions of rural/urban balance. The problem is how to strike a proper balance between the unrealistic goal of income equalization and too modest objectives (such as equality in the growth rates of rural and per capita incomes, which implies a widening of absolute income differentials). Furthermore, income goals alone are insufficient. Some attention should be paid to raising the levels of service provision in rural areas towards those prevailing in urban areas[23] as well as to redressing the imbalance in employment opportunities by creating more jobs in rural areas. Although this approach refers to incomes, services and jobs, it clearly has implications for the distribution of population. The examples given above suggest that it is possible to define rural/urban balance in terms of population distribution and then to work out the implications for income and welfare differentials or to define it through income and welfare measures and to spell out what this definition means for the spatial distribution of population. The symmetry of this choice reinforces the earlier argument that population distribution objectives have little independent validity; they must be linked with income, employment and other more general goals, both spatial and non-spatial.

A looser interpretation of rural/urban balance stresses that urban and rural development are interdependent and complementary and that balance in the sense of attention to both sectors will raise overall levels of living more quickly than with development strategies heavily biased in favour of one sector or the other. In terms of population distribution, this interpretation implies that the maximization of rural population (or its corollary, the minimization of urban population) would be both inefficient and inequitable. An appropriate distribution of population between urban and rural areas is a distribution that is consistent with the efficient development of agriculture and with a marked convergence in urban/rural income and welfare differentials. In the vast majority of cases, this situation will imply substantial rural-urban migration, though the dominant streams may flow from rural areas to cities and towns in the vicinity rather than to the primate city.

H. Spread and backwash over space

Myrdal's[24] distinction between "spread" and "backwash" effects is well known: the former effects relate to the favourable impacts that a node may have on its hinterland; the latter represent the unfavourable impacts. Salvatore[25] suggests that these impacts are primarily related to effects on per capita income and economic structure. Applying the analysis to growth poles,[26] it may be argued that backwash effects would be dominant in the early years of a pole's expansion and would not be offset by spread effects until the pole was well established. This analysis focuses on what happens to spread and backwash effects over time. It is also possible, and highly relevant to a discussion of national spatial strategies, to analyse what happens to spread and backwash over space.

Spread/backwash analysis is as applicable interregionally (in the Myrdal fashion) as intraregionally. In the typical national space economy of a developing country, there are both spread and backwash effects around the primate city. These effects decay over distance in a way that might be expressed in terms of a gravity model. However, the important point is that spread decays much faster than backwash, especially

[21] Rural development programmes would avoid this inconsistency, but to have a significant impact they may have a high opportunity cost in terms of the use of the investment resources.

[22] In addition, high in-migration rates into metropolitan areas may promote rural/urban earned-income convergence by dampening the wage levels of existing city residents. However, one effect of such dampening is probably a shift towards profits, with capital and land-owners gaining disproportionately from urban income growth.

[23] Equal provision of services is impossible, unless resources were unlimited, since many services depend upon relatively high population size and density thresholds and hence can be provided only in cities and towns. A quite different way of defining rural/urban balance is in terms of balance in the internal terms of trade between agricultural and non-farm prices. This means is probably too limiting, since raising farm prices may not have a large enough impact on relative rural incomes, especially if the gains accrue regressively to farmers rather than to labourers.

[24] Gunnar Myrdal, *Rich Lands and Poor* (New York, Harper, 1957). Myrdal's original analysis was in core-periphery rather than node-hinterland terms.

[25] Dominick Salvatore, "The operation of the market mechanism and regional inequality", *Kyklos*, vol. 25, fasc. 3 (1972), pp. 518–536.

[26] Harry W. Richardson, "Growth pole spillovers: the dynamics of backwash and spread", *Regional Studies*, vol. 10, No. 1 (1976), pp. 1–9.

at relatively low levels of national development. The growth of the primate city is associated with favourable impacts on its surrounding hinterland, usually in the form of decentralization of economic activity (and population) within the core region. The backwash effects (otherwise known as polarization effects), on the other hand, are typically felt throughout the country, including the isolated periphery. In particular, migrants and savings flow to the primate city, depriving the other regions of their most motivated labour and of their only sources of investment.[27]

From the point of view of spatial distribution objectives, there is an obvious way of breaking up this pattern. If spread decays more rapidly over space than backwash, the solution must be to create additional sources of spread, which may be achieved through the promotion of a set of regional metropolises. Spread effects in the form of radial diffusion will be created in the hinterland around each of these regional centres. Thus, a much higher proportion of national economic space will be accessible to spread effects. At the same time, because the regional metropolises will compete with the primate city for migrants and savings, the massive polarization effects from the periphery to the core will be reduced—in effect shared among a larger number of centres. As a result, the balance between backwash and spread effects will be much more equal in an urban system with several large cities than when the primate city is dominant. The multinodal system is thus a preferable system for spatial diffusion of development. It is the system most easily reconciled with equity objectives and, more debatedly, may be compatible also with efficiency objectives.

I. Reduction of regional disparities and population distribution

The dominant focus of spatial policy efforts in both developing and developed countries has been the reduction of interregional disparities in income and welfare. An interesting question is whether this goal necessarily implies measures to change the distribution of population, either interregionally or intraregionally. Of course, the distribution of population will change spontaneously, as rural residents migrate to the primate city, to smaller cities closer to their homes or to other higher fertility or land-abundant rural areas. Furthermore, there will be sizeable streams of interurban migration, both up and down the urban hierarchy (in the early phases of economic development, upward movement will predominate, often connected with the well-known two-stage migration process). The issue is whether policy-makers should intervene in these flows in order to bring about a convergence in regional income disparities.

There is no unique answer to this problem. In many sets of circumstances, migration from the periphery to the core leads to a reduction in income differentials, even if the migrant himself improves his level of living. The reason is that out-migration from rural peripheries may relieve the pressure on the land, reduce underemployment and raise per capita incomes. Conversely, the new migrant to the city may reduce per capita income there because his earnings are below the city average (assuming he earns income at all, probably in the informal sector) while the excess supply of labour may dampen urban wage growth. In such a case, the appropriate form of intervention to reduce income differentials may be to accelerate rural-urban migration. Obviously, this solution will almost always conflict with population distribution goals, so the compromise solution is to do nothing with regard to the out-migration stream and to concentrate on measures to promote regional development. Of course, one of the hopes of regional policy-makers is that one effect of regional development efforts will be a reduction in out-migration, but it is not clear that per capita incomes would not rise faster if out-migration were encouraged. A counter-argument may be based on the selective-migration hypothesis, but this argument is not convincing for rural regions in developing countries.

It is not difficult to construct a counter-example where migration from the periphery to the core widens welfare differentials; indeed, the backwash-effect analysis rests heavily on this presumption. The analysis is based on a combination of agglomeration economies in the core (increasing returns to labour) and some variant of the selective-migration thesis. Whether demonstration of such a case would justify migration controls depends upon the mix of policy objectives, as this case involves a clear trade-off between efficiency and equity. Again, the simplest and usual response would be a regional development strategy attempting to generate agglomeration economies in the periphery rather than a direct attack on the population distribution.

In general, then, policies to reduce interregional disparities are unlikely to focus on attempts to change the interregional population distribution. However, the intraregional distribution of population is likely to figure prominently in such policies. The most obvious case is a growth-centre strategy, which implies the polarization of population within regions towards one or more selected centres which receive a disproportionate share of infrastructure investment and job creation efforts. Furthermore, to avoid the replication of intraregional core-periphery dichotomies analogous to those observed nationally, policy-makers will need to ensure public service delivery to the rural residents within a region, which means promoting a hierarchy of urban service centres—a task that implies major changes in the regional settlement pattern. Regional development efforts that neglect this aspect run the risk of setting up industrial or resource enclaves which

[27] On the other hand, the impact of any savings outflow is partially offset by an important spread effect, substantial urban-rural remittances from migrants in urban areas. See Oded Stark, *Economic-Demographic Interactions in Agricultural Development: The Case of Rural-to-Urban Migration* (Rome, Food and Agriculture Organization of the United Nations, 1978).

may raise the gross regional product but do little to reduce interregional (and especially interpersonal) income disparities.

J. Limitations on planning population distribution

One reason for downplaying the role of population distribution goals in development planning, especially in a mixed economy (and most developing countries are mixed economies), is the limited capacity of planners to implement measures to achieve those goals. There are two main sources of this limitation. The first is that planners do not usually directly control the movement of population among areas but merely influence it indirectly by means of infrastructure location decisions and actions to affect the location of private industry. The conversion of the spatial distribution of economic activity and the public capital stock into a particular distribution of population depends upon the net effect of hundreds of thousands of individual acts of migration. These acts are not easily determined by public policy, even though the moves are not random but coalesce into dominant migration streams because individuals tend to respond in similar ways to spatial differences in economic opportunities and because group behaviour (e.g., the "friends and relatives effect") may be more prevalent than atomistic behaviour.

Secondly, the spatial distribution of economic activity in a mixed economy is the product of both public and private sector actions, and the latter actions may operate quite independently unless policies concerning distribution of industry are very strong. It is true that the provision of industrial infrastructure, government persuasion and locational fiscal incentives may influence the area choice of private firms, but they are unlikely to swamp the imperatives of locational determinants (e.g., access to resources or markets) or the locational preferences of the private decision-makers.[28]

The traditional steps in development planning represent the domain where the public sector is most active. These steps can be described in terms of the "planning by stages" approach popularized by Tinbergen. The first phase, the macro phase, is concerned with determination of overall targets relating to gross national product, investment, public spending, exports and other macro variables. In the second phase, the meso phase, the overall targets are converted into sectoral targets which are distributed among regions. In the final phase, the micro phase, the individual projects of the plan needed to achieve its goal are specified. These projects deal primarily with public investment in infrastructure, human investment, social welfare, technical assistance, defence etc. They have a substantial impact on the spatial distribution of economic activity, but they are not the only influence. The private sector may account for the majority of total investment and its impact on the spatial distribution of activity is outside the control of the public sector. The planners may provide some guide-lines through an indicative planning mechanism, but there is no reason the private sector should respond. It may be more responsive to incentives and subsidies, but probably not enough for the planners to predict accurately the spatial distribution of economic activity. Even if the spatial distribution can be forecast, converting this distribution to a desired population distribution is even more difficult, because there are many more factors involved in migration than in industrial site choice and because efficient migration instruments are hard to design.

This pessimism might be dissipated if the planning activities of the public sector—particularly the location of infrastructure, both industrial and social—could simultaneously determine the spatial distribution of industry and (directly and indirectly) population. Although there is some mobility response to infrastructure provision, little empirical evidence exists that such provision has a major influence. The alternative, forecasting how the private sector (firms and households) will behave and then using the plan as a means for moving the expected spatial distribution of economic activity and population towards the desired distribution, will work only where the public sector share of total investment is high. Preoccupation with population distribution goals is not very productive if development planners lack the instruments or the span of control to attain them.

Because the role of population concentrations in a development plan is predominantly as demanders of goods and services and as suppliers of labour, it should be conceptually possible to construct a development planning framework that simultaneously handles the allocation of economic activity to sectors, its distribution among regions and the spatial distribution of population. However, it is probable that such a framework could be implemented only in a centrally planned economy, primarily because a model having this capacity would probably be an optimization model in which not only production plants but workers would be assigned to their optimal locations. It may be possible for a model to be expressed in probabilistic terms to permit a degree of locational choice for firms and households, but it remains doubtful whether the end-result would be helpful to development planners.

Summary and conclusions

The main arguments of this paper may now be summarized:

(*a*) Population distribution goals should not be considered in isolation from general societal goals and are, indeed, subservient to them. The settlement pattern is strongly influenced by many non-spatial macro and sectoral policies;

[28] Of course, the private sector may successfully pressure the Government to make infrastructure investments at locations favoured by the private sector, even if these investments are incompatible with spatial policy objectives.

(*b*) There is no systematic relationship between population distribution measures and development indicators. Developing countries are so heterogeneous that it is impossible to draw generalizations about what kind of population distribution patterns favour or inhibit development. However, flexible national spatial strategies may be justified if they are tailored to the specific characteristics of each country;

(*c*) There is no optimal city size; and city size has little meaning if divorced from structure, function and position in the urban hierarchy;

(*d*) The widespread strategy of controlling the growth of the primate city may be justifiable in some, but certainly not in all circumstances. Also, it is difficult both to convert such a strategy into specific targets and to devise effective measures for implementing it;

(*e*) The lower ranks in the urban hierarchy have been unjustly neglected in settlement policies. Medium-sized towns may be promoted to strengthen the linkages among the ranks of the urban hierarchy, while attention to the smallest urban centers may help to stimulate rural development. In view of resource constraints, public services to the rural population must be supplied through a hierarchy of service centers;

(*f*) The Pareto coefficient (α) has no special significance as a policy parameter and is of no value in indicating whether the existing distribution of population is close to optimality;

(*g*) The feasibility of population distribution objectives is very sensitive to whether the country in question is experiencing, or is about to experience, polarization reversal. The costs of premature interventions or of the wrong type of intervention may be very high;

(*h*) Rural/urban balance is a nebulous concept. It is sometimes defined in terms of the population distribution, sometimes by reference to income and welfare measures. These two approaches are related. A loose interpretation of rural/urban balance stressing the complementarity of urban and rural development is appealing;

(*i*) An analysis of spread and backwash over space (as opposed to time) suggests that spread decays with distance faster than backwash. This suggestion implies that an urban system containing several regional metropolises will magnify aggregate spread effects and reduce backwash compared with a system dominated by a primate city. A higher proportion of national economic space will be accessible to spread effects, while polarization forces will be shared out among a larger number of centres;

(*j*) Policies to reduce interregional income and welfare disparities are more likely to involve intervention to change intraregional than interregional population distributions. However, changes in the national settlement pattern will result from successful regional development policies, primarily through the effect on migration rates;

(*k*) Development planners have a very limited capacity to implement population distribution strategies because their controls on migration are indirect and weak and because in a mixed economy the private sector plays a strong and independent role in determining the spatial distribution of economic activity (and hence of population). A development planning framework that simultaneously allocates economic activities to sectors and regions and distributes population spatially probably can be implemented only in a centrally planned economy.

The tone of this paper is negative. Appropriate population distribution goals are difficult to define because the spatial dimension is merely one aspect of general economic and social development; yet, there is a lack of understanding of the relationships between spatial distribution and general societal objectives. It may be possible to construct a development planning model that simultaneously deals with macro, sectoral, project and population distribution variables, but no acceptable model currently exists. In country development plans, the spatial distribution chapters are typically only very loosely connected with the main plan. Moreover, even from the theoretical point of view, the concept of an optimal population distribution is barely meaningful.

Even if policy-makers were clear about their population distribution goals and could provide a justification for them, the means at their disposal for attaining those goals are very limited. The provision of infrastructure and services to population in rural areas will be effective only if combined with a broad range of measures for promoting agricultural and rural development. It is dangerous for planners to use industrial infrastructure to attract industry (and hence indirectly population) to a particular area without ensuring that the infrastructure shall be fully utilized by supplementing the infrastructure inducement with locational incentives. Also, the offer of such incentives may not outweigh the higher costs of disadvantaged locations sufficiently to overcome locational inertia unless they are reinforced by disincentives to further development in the primate city and its surrounding region. The relocation of population, especially from low-fertility to potentially high-fertility rural areas (e.g., colonization schemes), may be stimulated by migration subsidies—offers of free land, seed, fertilizer and technical assistance—but the degree of success is variable. Measures to control migration directly are rarely to be recommended because of the high opportunity costs, the difficulty of implementation and the risks of political opposition.

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II. OBJECTIVES AND RATIONALES FOR REGIONAL POPULATION REDISTRIBUTION IN DEVELOPING COUNTRIES

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The period following the Second World War has been of considerable significance in many parts of the world because of the dramatic changes in political and economic conditions which it witnessed. In virtually all parts of the world, colonialism and imperialism were on the retreat and country after country, especially in Africa, Asia, parts of South and Middle America, and notably in the Caribbean region, secured political independence from erstwhile European colonial Powers.[1] With independence came an increasing concern for the social and economic conditions of the masses of the population and the beginning of deliberate and systematic planning as a means of improving those conditions. In order for the process of planned development to become self-sustaining, it was internationalized under the aegis of the United Nations. The 1960s were declared the First International Development Decade to be followed by a second in the 1970s. National and international agencies were induced to monitor and evaluate their performances during each decade in terms of the objectives they set about to achieve at the beginning of each plan period.

For many developing countries, the most remarkable effect of over two decades of deliberate development planning has been the unplanned but striking disparities in living conditions and opportunities in different regions of the country. A large part of these disparities had arisen because of the single-minded (and perhaps simple-minded) devotion to the goal of "economic growth" with little or no concern for the social and spatial consequences of economic decisions. The results have been the rise of one or very few primate-city type metropolitan centres where most of the industrial capacities are concentrated and which in consequence excite employment expectations in the country as a whole far beyond their capacity to fulfil; the corresponding growth of urban unemployment and underemployment, particularly in these metropolitan centres;[2] the decline of many small and medium-sized urban centres, particularly in their relative ability to attract industries or investment; the deepening of colonially derived differences in regional resource utilization especially as between export-producing and non-export-producing regions; the general neglect of the rural areas but particularly of small-scale, peasant producers who form the majority of the population; and in short, the creation of regional disparities with respect to the distribution of income and welfare.

Not unexpectedly, this outcome of the development process set in motion in virtually all developing countries complex streams of population movements. While the rural-to-rural, seasonal and longer term migration movements of colonial times continued, especially to the export-crop producing areas, new flows developed from rural areas and from small and medium-sized towns to the metropolitan centres. The massive volume of these movements was unprecedented in the history of most developing countries, as was the fact that the majority of those involved were, compared with earlier movements, relatively young people, usually with some education. In some countries, particularly those in Africa, the volume of this out-migration from the rural areas began to create conditions of rural labour shortage and to affect the viability of agricultural production in many families. At the national level, this development, along with other factors, combined to slow down the rate of growth of agriculture and in some cases to bring about serious food shortages. At the same time, there was an accumulation of unemployed, underemployed and unemployable persons in the major urban centres, with associated effects on the rates of violence, crime and social insecurity.

It is clear that no one can deny that most Governments, by adopting a strategy of planned development and taking decisions that affect many areas of national life, economic and otherwise, are already influencing regional patterns of population distribution. However, the results are largely unintended and in many countries are considered far from satisfactory. Indeed, the regional disparity of opportunities reflected in the current pattern of population distribution is regarded as one of the most serious challenges facing Governments in developing countries and an important factor in the trend towards economic stagnation noticeable in most of them. From this perspective, the crucial question is thus not whether a Government should intervene to influence regional population dis-

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[1] Large parts of South America had become independent from the rule of Spain and Portugal in the nineteenth century but the social and economic relations between classes were hardly an improvement on those during the colonial period until after the catharsis produced by the Second World War.

[2] To appreciate the positive correlation between urban job creation and heightened urban unemployment, see Michael P. Todaro, "A model of labor migration and urban unemployment in less developed countries", *American Economic Review*, vol. 59, No. 1 (March 1969), pp. 138–148.

tribution (since it is already doing this) but whether the intervention should be deliberate, so that there may be greater convergence between intended and actual outcome in the development process. From surveys of developing countries within the past few years, it is clear that many developing countries are concerned about the maldistribution of their population and have expressed desire to act deliberately to influence redistribution.

This paper presents arguments to indicate the importance of deliberate government intervention to influence regional population distribution. It is important to point out that the private sector (both indigenous and foreign) also intervenes to influence regional population distribution. However, only arguments for government intervention are presented here, which is reasonable since the Government itself could also act to regulate the activities of the private sector.

The arguments fall under five broad heads—economic, environmental, social, administrative and political. Each group of arguments is discussed in a section of the paper. Examples of attempts by various Governments to formulate policies and/or initiate and implement programmes in line with these arguments are discussed and evaluated. In particular, where such interventions have been unsuccessful, an attempt is made to indicate at least some of the crucial factors involved. The concluding section discusses the current world economic situation which is likely to lend special urgency to the necessity for developing countries to set about the redistribution of their population as a deliberate means of establishing the process of their development on a firmer and self-sustaining basis.

A. Economic arguments for intervention

The first economic argument is that in most developing countries, there exist regional disparities in the distribution of income and welfare which have had some impact on the spatial maldistribution of population. This situation probably reflects, above all else, the interregional heterogeneity in resources found in most countries, which impedes any long-run equalization of returns.[3] For example, the developmental advantages possessed by urban centres (agglomeration and other economies) are superior to those of rural areas; areas with natural resources and areas with export crops have advantages over areas with none. It is therefore unlikely that the desired population redistribution will be achieved without intervention. Even though market forces may work in the long run to achieve the goal of population redistribution, one does not know how long is the long run; and, in any case, developing countries cannot afford to wait.

Perhaps the most important economic argument in support of government intervention to influence population redistribution is that of efficiency in the use of national resources. For any given country, these resources can be identified as falling broadly into four categories, notably, labour, cultivable land, investible capital and organizational or entrepreneurial capacity. Population distribution clearly can hinder or promote overall economic development. In that respect, planning for population redistribution and planning for economic development are obviously interdependent.

The efficiency argument in relation to the use of the resources has three sides to it: first, to prevent, in so far as is possible, the underutilization of any one of the four categories of resources; secondly, to secure their optimal allocation between various sectors of the economy; and thirdly, to achieve a satisfactory rate of overall resource growth. It is common knowledge that these resources vary in their incidence and availability for productive use from continent to continent and from country to country. In Africa and South America, for instance, cultivable land is in far greater supply than in Asia; and large parts of these two continents remain underutilized. Even in Asia, where one is more conscious of the extreme pressure of population on the land, there are still areas where underutilized land is available and there are considerable opportunities for a fuller utilization of the abundant labour resource if effort can be expended on their mobilization and productive organization. The continued importance of migration in search of cultivable land in a country such as India attests to the existence of underutilized areas even in such an over-populated region of the world.[4]

Yet, the full benefits of such redistribution of population to achieve better utilization of resources will not be reaped if, as is currently the case in many countries, Governments do not intervene to improve and sustain the access of individuals to the resources. There are two principal ways of improving individual access to underutilized resources, namely, the provision of necessary infrastructural facilities and the restructuring of the basis of social relations. The first method is by far the easier and Governments have, in many countries, already intervened to improve the chances of many regions to attract population. Such interventions have included the construction of dams and irrigation works to convert former waste lands into arable districts. This type of intervention sometimes tends to be multi-purpose including on many occasions the provision of hydroelectricity. Examples include the development in the Ganganagar (Rajasthan) and Nizamabad (Andhra) districts in India, in the Niger Valley in Baceta (Nigeria) and around Segou (Mali) and over large parts of north-western Mexico. Indeed, in those parts of Mexico, it is claimed that between 1950 and 1964, over 1 million hectares of new lands were put under production through government irrigation projects.[5]

[3] See Niles Hansen, "A review and evaluation of attempts to direct migrants to smaller and intermediate-sized cities", pp. 113–127 of the present volume.

[4] Myron Weiner, "Socio-political consequences of inter-state migration in India", in W. Howard Wriggins and James F. Guyot, eds., *Population, Politics and the Future of Southern Asia* (New York, Columbia University Press, 1973), pp. 190–228.

[5] Lehman B. Fletcher and William Charles Merrill, eds., *Latin American Agricultural Development and Policies*, International Studies in Economics Monograph, No. 8 (Ames, Iowa, Iowa State University, Department of Economics, 1968), p. 78.

Apart from irrigation, infrastructural development to improve the capacity of regions to attract population also takes the form of drainage and land reclamation, malaria eradication and the establishment of modern road networks. In Latin America, for instance, the most notable population redistribution efforts based on road construction include the Northern Transandean Highway Project in Peru and the Trans-Amazon Highway Project in Brazil.[6] With regard to the latter, the Brazilian Government reserved to itself ownership of a tract of land 100 kilometres wide on either side of the highway. It also set up the National Institute of Colonization and Agrarian Reform (INCRA), the task of which was to settle selected farmers, drawn mostly from the north-eastern region of the country, on 100-hectare plots each with 500 metres of main road frontage, focusing on "agrovillas" located at 100-kilometre intervals along the highway. Potential colonists had to have a family work-force equivalent to at least 2.5 adults, farming experience and a "capacity for work". They were provided with free transportation to their land, a small house and a loan, which in some cases was as high as $2,000. It was hoped that with those inducements some 500,000 colonists would be attracted by 1975 and that the population of the region would rise to about 18 million by 1990.

Another method used in redistributing population through the provision of infrastructure is through the establishment in a region of a new town. The most notable example of this type of strategy is that connected with the transfer of national capitals, usually from a coastal to an interior, relatively poorer and underpopulated region of the country. Such new national capitals include Brasilia in Brazil, Abuja in Nigeria and Dodoma in the United Republic of Tanzania. The infrastructural role of such capital cities is essentially that of providing a ready market for productive activities within their immediate region, serving to create new employment opportunities and to that extent attracting more population.

In spite of the cogency of the arguments for government intervention based on the more efficient utilization of resources through investment in infrastructural development, not all projects or programmes of this type have succeeded. In general, irrigation and land reclamation projects have recorded some of the most notable successes due, no doubt, to the fact that the demand for water for crop growth is so critical that farmers are willing to provide other inputs where this necessity is guaranteed. None the less, even in such schemes, some of the social, as distinct from the population, objectives may fail where inadequate attention is paid to monitoring the fortunes of small farmers who may end by being bought out by richer farmers and money-lenders. Such persons may remain on the scheme as landless labourers or even emigrate again to some other part of the country, particularly to the cities.

Other types of infrastructural incentives, such as road construction and new town development, may fail to achieve the objective of population redistribution and in some cases may inadvertently give rise to the directly opposite effect from that planned by facilitating rapid out-migration from a given region. This result is very often due to a failure to diagnose in detail the developmental problem of a region and to conceive of a package of programmes that need to be applied simultaneously. The frustration of the local population when it has a single element out of a needed package of programmes not infrequently precipitates the decision to migrate. With major road projects, the temptation is greater for many Governments to ignore the more crucial need for rural feeder roads as well as for vital inputs to help the farmers more directly in their productive activities. The same is true with new town development, especially as it is very unlikely that the authority or corporation set up to establish the new town will also be given constitutional powers to oversee the development of the rural hinterland of the town. In this connection, the situation with regard to the development of a new federal capital for Nigeria may prove of some interest because the Federal Capital Development Authority has responsibility for the development not only of the capital city but of the rural area occupying the remainder of the 8,000-square kilometre capital territory.[7]

The second principal way of improving individual access to underutilized resources in a country is through restructuring of the basis of social relations, in particular as those relations apply to the rights to land. In many underdeveloped countries, the social relations connected with access to land derive from a period of social evolution in which issues of equity and efficiency were not so much in the forefront of national concern. Currently, the problem of land reform has assumed special importance in virtually every underdeveloped country and is increasingly regarded as the central issue of development.

Land reform as a means of redistributing perhaps the most vital of national assets clearly has implications for the redistribution of population. As such, under pressures of various kinds, ideological or social, a number of countries have embarked on it. Land reform, however, can be either piecemeal or comprehensive. Piecemeal land reform is usually evident in programmes of land resettlement of various types undertaken by Governments in which they establish a new system of tenure and of average size of land holdings. Usually such programmes are relatively small in scope and invariably involve land already in the public domain; thus, little negative social reaction by land-owning groups is manifested. By contrast, comprehensive land reform requires wide-ranging

[6] See C. T. Smith, "Problems of regional development in Peru," *Geography*, vol. 53, part 3 (July 1968); and Janet D. Henshall and Richard P. Momsen, *A Geography of Brazilian Development* (London, Bell, 1974), pp. 230–231.

[7] Nigeria, Federal Capital Development Authority, *The Masterplan for Abuja, the New Federal Capital of Nigeria* (Lagos, 1979).

legislation which redefines not only the size and tenurial basis of land holding but the relationships between social classes in the society.

In much of Latin America, for instance, access to land has, for the majority of the population, been greatly influenced by the semi-feudal hacienda system introduced by the Spaniards and the Portuguese in the seventeenth century. This system has produced the characteristic farming types comprising very large farms (latifundia) and very small farms (minifundia). Isacovich,[8] for instance, quotes examples from the Province of Buenos Aires in Argentina, where in 1929 three families owned latifundia, each of more than 200,000 hectares (or about 850 square miles) of land and approximately 12 other families each owned more than 100,000 hectares (or about 400 square miles) in what were regarded as some of the most fertile areas of the country. Such large properties were originally cultivated by workers who may have been Indians inherited from the time of the land grant or slaves. In modern times, most of these persons are treated as tenants or share-croppers sharing much of their production with the owners. Apart from the latifundia there are the large plantations of subtropical and tropical America where slave labour and indentured labour from Asia were used to develop vast acreages of such crops as coffee, cocoa, cotton and sugar. Today, most of the workers are wage-earners but their status remains low and insecure.

This land tenure situation, by failing to make rural life of any significant interest to a large proportion of the rural population, has contributed significantly to the massive out-migration to the urban centres. A cross-sectional analysis[9] of rural out-migration in 16 countries of Latin America states that the rates of rural out-migration are positively related to the proportion of farms held as latifundia.

In the circumstances, it is not unexpected that since about 1910 many Governments in Latin America have engaged in land reforms of various types and with varying degrees of success. In Mexico, for instance, land-tenure reforms began in the 1910s with much of the newly allocated land being placed in collectives (*ejidos*).[10] In the inter-war period conditions for tenants in Argentina and Uruguay were greatly improved by rural tenancy legislation giving security to tenants by means of contracts lasting for a minimum of several years, and eventually in some cases in Argentina, enabling the tenant actually to purchase the land. There have also been reforms in the Dominican Republic since the early 1930s and about 100,000 people have been resettled there. In Bolivia, following the revolution in 1952, an agrarian reform law was introduced in 1953 with the expressed purpose, among others, of restoring to Indian communities land appropriated by private persons.

None the less, not until the late 1950s and early 1960s was much done in the matter of land reforms in most countries of Latin America. Cuba appears to have paved the way with the nationalization of land in 1959/60 and the establishment of State-owned farms. Reforms were introduced in Colombia (1961), Chile (1963), Peru, Paraguay, El Salvador, Honduras and Costa Rica (1964). Peru planned to resettle about 100,000 peasant farmers with $43 million of aid from the United States of America. Venezuela redoubled its effort during that period and the number of families resettled rose from 5,000 on 93,000 hectares (1948-1958) to 61,000 on 1.7 million hectares (1959-1962).

In Asia, considerable difference exists between the densely populated countries of Bangladesh, India and Pakistan, and the less densely populated countries of Eastern South Asia, in the impact of land-tenure reforms on regional population distribution. In the former group of countries, the impact is more in terms of correcting inequities in the system of social relations rather than helping to make new land available and thereby stimulating population redistribution. In the latter group of countries, a considerable amount of underutilized land exists and Governments have had to undertake land-tenure reforms to make that land available to an increased proportion of the population. In Indonesia, for instance, the earlier colonial programme of transmigration from the densely settled central island (Java) to the relatively sparsely populated outer group of islands, was followed in 1960 by the Basic Agrarian Law (No. 5/1960) which vested ownership of land in private persons.[11] In colonial times, land was owned by the State and foreign firms thus found it easy to acquire large estates. In trying to make land available to as many peasants as possible, the new law thus had to limit the amount of land that an individual could own and forbad absentee ownership. It was hoped that some 1 million hectares would become available for redistribution. However, by 1970, it was clear that outside the estate sector the reform programme had had little or no effect. Indeed, as Pelzer states, "the fact of the matter is that [in Indonesia], the problem [of a nation-wide minimum holding] cannot be solved by a redistribution of the land, but only by a redistribution of the population or by the creation of employment outside the agrarian sector—either of which would have to be accomplished on a truly massive scale".[12]

The situation in the former Democratic Republic of Viet Nam indicates the nature of what massive population redistribution through land reform can imply. As early as November of 1945 the Government launched its agrarian reform which continued up to the end of 1957. During the period, some 810,000 hectares of

[8] Marcelo Isacovich, *Argentina, económica y social* (Buenos Aires, Editorial Quipo, 1969), p. 37.

[9] R. Paul Shaw, "Land tenure and the rural exodus in Latin America", *Economic Development and Cultural Change*, vol. 23, No. 1 (October 1974), pp. 123–132.

[10] John P. Cole, *Latin America: An Economic and Social Geography* (Washington, D.C., Butterworths, 1965), pp. 96–100.

[11] Karl J. Pelzer, "The agricultural foundation", in Bruce Glassburner, ed., *The Economy of Indonesia* (Ithaca, New York, Cornell University Press, 1971), p. 138.

[12] *Ibid.*, p. 140.

land, or about 37 per cent of the cultivable land, were distributed to 2.1 million families, a total of 9.5 million people.[13] Because land reform had also made considerable headway in the former Republic of South Viet Nam prior to unification, there was an interesting absence of the call for land-rent reform on the government agenda at the time. Indeed, by the end of 1974, some 1.3 million hectares were already distributed to more than 1 million farmers.[14]

The position in Africa is in many ways similar to that in Eastern South Asia. In most countries, because of the communal ownership of land, agrarian reform has not been an important means of achieving significant redistribution of population. The major exception in this regard has been the United Republic of Tanzania, where as a result of a socialist ideology, a comprehensive programme of resettlement or "villagization" of the rural population was embarked upon by the Government. Although ideas about such a programme had been initiated as far back as 1962 and had been codified by an Act of Parliament in 1967, it was not until 1974 that the redistribution effort was undertaken on a massive scale involving virtually the entire country. Within the first eight months of that year, over 70 per cent of the rural population had been made to move from their traditional isolated farmsteads into new and more nucleated village settlements.[15] This process not only made it possible for the United Republic of Tanzania to change the basic pattern of its population distribution but made the new village settlement the focus of development itself and the fundamental unit of the emergent Tanzanian society.

In concluding this section on the economic arguments in support of government intervention to influence regional population redistribution, it is important to stress that such intervention also has implications for the optimal allocation of resources between sectors of the economy. There is a sense, for instance, in which it can be said that many of the negative externalities arising from the current strategy of industrialization have been borne by the agricultural sector. In many countries, agricultural development has been starved of the investment it required and certainly of the privileged attention it deserves by virtue of the very large proportion of the population dependent upon it. Programmes of investment to achieve a better match between rural population distribution and cultivable land would go some way to redress this balance and to ensure a fairer distribution of national assets between different areas of the country. In addition, and as part of a package, such programmes could restimulate the flagging agricultural economy in many developing countries and help achieve a satisfactory rate of overall resource utilization and growth.

[13] Nguyen Tien Hung, *Economic Development of Socialist Vietnam, 1955-1980* (New York, Praeger, 1977), pp. 55–57.

[14] Ibid., p. 161.

[15] Claes-Frederik Claeson and J. E. Moore, *Mwanza Integrated Regional Planning Project* (Stockholm, 1976), vol. III.

B. Ecological arguments for intervention

Ecological disequilibria arising in the process of economic development in a country often provide a powerful argument for government intervention to influence regional population distribution. Two types of causes can be identified as giving rise to such disequilibria. The first type can be described as spontaneous, arising from the unintended consequences of the activities of a large number of individuals. The second is the deliberate type where the Government or large-scale organizations undertake planned ecological changes as a result of which a certain degree of equally planned population redistribution becomes necessary.

The first type of ecological disequilibria is perhaps the more serious because it frequently reaches a somewhat advanced stage before it becomes a priority for governmental attention. Such fundamental changes in ecological conditions have been most noticeable in those less developed regions where economic development remains largely based on bush-fallow agriculture. Within such a system of production, the remarkable increase in population which has been particularly characteristic of the period since the end of the Second World War has encouraged not only an increasing fragmentation of land holding but a drastic reduction in the length of fallow. Particularly in areas of deciduous tropical forest, such changes, where they proceed far enough, give rise to a complete transformation of the vegetative covering such that, instead of woody plants, the fallow becomes mainly tall, coarse grass vegetation. In many parts of this marginal region, this result is also produced as a result of the constant use of fire to burn off the woody regrowth before each cultivation. However, the use of fire tends to encourage the dominance of certain types of weeds, particularly the *imperata cylindrica,* which make it more difficult for man to cultivate such land for a long time. Indeed, it has been estimated[16] that by the early 1950s some 40 per cent of the Philippines and 30 per cent of Indonesia were then covered by the *imperata,* presumably as a result of ecological deterioration due to human activities. These figures may be somewhat on the high side, and another report[17] written at about the same time puts the proportion of Philippines covered by grassland to no more than 18 per cent.

Grassland succession is, however, not the ultimate in the stages of ecological disequilibria which can follow as a result of continuous population pressure on land. As the cycle of cultivation, inadequate fallow, succession of grassland types, burning and cultivation proceeds, the land surface becomes less and less protected against the full force of the rain. Sheet erosion is thus succeeded by rill erosion, which can attain the magnitude of gully erosion with almost complete and irreversible destruction of the soil. Evidence of such an extreme impact of population on the environment is

[16] Pierre Gourou, *L'Asie* (Paris, Hachette, 1953), p. 288.

[17] Karl J. Pelzer, *Pioneer Settlement in the Asiatic Tropics* (New York, Institute of Pacific Relations, 1945), p. 19.

noticeable as enclaves in various developing countries. In Nigeria, for instance, the Agulu-Nanka gullies in the area of intense population pressure in the eastern region of the country are some of the most conspicuous evidence of the ecological consequences of human activities.[18] Of course, it is generally agreed that human activities are not the only factor responsible for such ecological susceptibilities. The structural topographic and structural characteristics of the soils themselves play an equally significant role in the resulting ecological breakdown.[19] None the less, it is indubitable that the human factor is the precipitate, setting the chain of events in motion and bringing the impeding catastrophe to a head. Ecological changes of the type described are not induced solely by overcultivation. They are also brought about through overgrazing arising from nomadic movements of animals and the tendency to concentrate them in a few locations particularly around watering points. The effect of animal hoofs on the structure of soils around such points is to make the soils particularly susceptible to wind erosion with the inevitable consequence of lowering the water-table and destroying the pasture dependent upon it.

Not unexpectedly, therefore, long before the final collapse of the ecological base of their activities, individual households begin to move away from these areas in search of virgin grounds where the same process can be repeated. Sometimes, however, they do not move out of stressed areas in sufficient number to prevent the final slide to environmental catastrophe. On other occasions, there are not sufficient virgin lands to allow this system of cultivation or animal husbandry to be reproduced in other parts of a country. It is in such circumstances that it becomes almost imperative for the Government to intervene to ensure that the distribution of population shall be more in consonance with the ecological capability of different regions of the country. Such intervention has taken the form either of planned colonization of cultivators or of the sedentarization of nomadic herdsmen.

A number of Governments have already undertaken planned colonization by shifting cultivators as a means of reducing their threat to the ecological security of the area. In Thailand, for instance, there is a continuing government project dating from the 1960s directed towards resettling various hill tribes engaged in shifting cultivation.[20] It is claimed that this type of cultivation was already posing a serious threat to the valuable teak forests as well as to the elaborate irrigation and hydroelectric schemes on which large parts of the country depended. Moreover, the failing returns from shifting cultivation were already tempting more and more of the tribesmen to turn to the illegal growing of the opium poppy.

Planned colonization by Governments often revolves around two major policy directions distinguishable as self-help or high capitalization. The former direction is often based on the argument that the chances of success of self-help colonization programmes are greater when the Government provides the settlers with the minimum of basic needs and leaves them to depend essentially upon their own initiative and effort. It is contended that this policy calls forth from them a high degree of commitment and a continuously growing sense of achievement which guarantees the success of the scheme. Examples of Government-sponsored self-help colonization schemes were particularly numerous in Africa in the late 1950s; and, apart from the goal of soil conservation, many of these schemes were meant to promote a certain degree of community development.[21]

The high-capitalization colonization schemes have always had as a major policy objective the introduction of advanced farming techniques in place of the increasingly ecologically unacceptable shifting cultivations. Not infrequently, therefore, such schemes have involved the installation of major public works, such as irrigation dams, and have placed great emphasis on mechanized production. Many of the schemes therefore have had the added objective of achieving better utilization of land resources along with relieving population pressure in other parts of the countries and training farmers in the use of cultivation techniques that are less ecologically risky.

The sedentarization of nomadic and semi-nomadic peoples has been a special feature of governmental intervention in regional population distribution in many countries of Africa, in particular. In some of these countries, this class of people forms a significant proportion of the total population. In Somalia, for instance, nomads and semi-nomads number about 1.3 million, or 58 per cent of the total population.[22] They also number about 3.9 million or 38 per cent of the population of the Sudan; and sizeable numbers are found in Mali, Nigeria and the United Republic of Tanzania. However, apart from the need to regulate and minimize the ecological impact of their activities, other reasons enter into governmental objectives in resettling them. These reasons include bringing them within the orbit of various social welfare services, such as education and health care, raising their level of living and their contribution to the national economy;

[18] B. Floyd, "Soil erosion and deterioration in eastern Nigeria: a geographical appraisal", *Nigerian Geographical Journal*, vol. 8, No. 1 (June 1965), pp. 33–44.

[19] See, for instance, G. E. K. Ofomata, "Factors of soil erosion in the Enugu area of Nigeria", *Nigerian Geographical Journal*, vol. 8, No. 1 (June 1965), pp. 45–59.

[20] R. Ng, "Land settlement projects in Thailand", *Geography*, vol. 53, part 2, No. 239 (April 1968), pp. 179–182.

[21] See, for instance, William Malcolm Hailey, *An African Survey: A Study of Problems Arising in Africa South of the Sahara*, rev. 1956 (London, Oxford University Press, 1957); and Keith M. Buchanan, "Internal colonization in Nigeria", *Geographical Review*, vol. 43, No. 4 (October 1953), pp. 416–418.

[22] D. Christodonlon, "Settlement in agriculture of nomadic, semi-nomadic and other pastoral people: basic considerations from a world view", in Food and Agriculture Organization of the United Nations, *Land Reform: Land Settlement and Cooperatives* (Rome, Food and Agriculture Organization of the United Nations), No. 1 (1970), pp. 40–51.

and, in some cases, integrating them more fully into the civil and political life of the country so as to ensure greater national security. Sedentarization often involves initiating nomads and semi-nomads to agriculture based on either irrigation or dry-farming conditions. For this reason, success often depends upon the calibre of officials handling the scheme and upon their understanding of the complex life-styles that have developed around the nomadic experience, and upon the general economic and ecological situations in so far as they continue to indicate the viability or otherwise of nomadism as a way of life. Apart from the population distribution effects of these measures, they also have the goal of redressing current ravages of the environment, such as desertification, in several developing countries.

As compared with government intervention to prevent further worsening of ecological conditions due to population stress, there are also instances when population redistribution is contingent on direct government modification of the local environment. This situation has been perhaps most notable as a result of the creation of large, man-made lakes for purposes of hydroelectricity development. Such lakes are particularly notable in Africa and include the Kariba, the Kainji, the Volta and the Aswan. In the process of their formation, these lakes invariably involve the submergence of farmland and homes and the displacement of a substantial number of people whose resettlement is generally accepted as a direct responsibility of the Government. In the creation of the Aswan High Dam, for instance, it was estimated that some 50,000 Egyptians and a similar number of Sudanese who lived along the Nile banks, south of the High Dam site, had to leave their homes as the reservoir filled the valley. Moreover, above the dam, about 180 miles of riparian lands stretching as far as the border with the Sudan and a further 70 miles within that country were submerged, rendering some 100,000 Nubians homeless and without any means of livelihood.[23] All of these villagers have been resettled further downstream around the sugar-refining town of Kom Ombo. Attention was given not only to constructing houses and reorganizing village groups but to constructing the necessary public buildings, such as schools, hospitals, stores and mosques. Equally important, electricity was provided for domestic use, a more adequate road system was constructed and continuously pumped irrigation water was supplied to replace the former dependence upon the annual Nile flood. Government intervention in population redistribution of this type has typically been characterized by some degree of attention to the overall convenience and comfort of the settlers. Although not all such resettlement schemes can boast of electricity or improved road systems, in general, conditions tend to be far better than in the period before the dam was constructed.

[23] See R. A. Beddis, "The Aswan High Dam and the resettlement of the Nubian people", *Geography*, vol. 48, part 1, No. 218 (January 1963), pp. 77–80.

This element of providing at least the minimum infrastructure has made such resettlement schemes relatively more successful than others. Where agricultural modernization has been added, the success has not often extended this far. Part of the reason is that the entire operation of constructing the dam, installing hydroelectric capacity and resettling the displaced population is usually delegated by the Government to a specialized agency or authority on whose priority list the agricultural development of settlers is very low. In consequence, the resources in capital, manpower and management attention required by such a project are not easily available. This factor is also largely responsible for the less than total success that is often recorded with resettlement projects as a means of coping with ecological problems arising from shifting cultivation or nomadic pastoralism.

C. Social arguments for intervention

The most important social issue calling for direct government intervention in the field of population redistribution is that of equity. Equity usually refers to the establishment by a Government of the goals of reasonable fairness in the distribution of income. Considerable ambiguity, however, surrounds this objective in respect of its key term: "reasonable fairness". No clear consensus has emerged as to what is meant by "reasonable fairness". None the less, it is generally accepted that this term implies substantial reduction of disparities in income and welfare levels not only between social classes but between different regions of a country. For this reason, one finds this objective variously formulated in different countries. In some, it is identified as the attempt to ensure balanced development between regions, while in others it is referred to as the reduction of income inequalities between geographical areas of a country.

However, it is possible, as some developed countries have done, to go beyond such vague formulations and explicitly define "reasonable fairness" as the attainment of more regionally equal living conditions and then proceed to put the concept into operation so that it entails the following:

(*a*) Specification of components of basic living conditions, such as employment facilities, access to social, commercial and cultural services, as well as to "good" environment;

(*b*) Determination of minimum standards to be attained by each region with respect to each of these components;

(*c*) Setting-up of maximum accessibility ranges within which services should be available to people in each region.

It is easy to show that such a concern with social equity will involve intervention by the Government so as to influence population redistribution, particularly of people with specialized skills and expertise. For example, to improve the access of a relatively disadvantaged region to improved educational opportunities

would involve deliberate attempts to encourage teachers not only to move into the region but to do so in sufficient numbers and to specified places so that the maximum distance range within which students would have to travel for the services of education would fall within prescribed regional or national norms. The same objective applies to medical personnel and the manpower required to sustain other social services. More important, this objective would force Governments to pay attention to the distribution of employment opportunities as well as infrastructure between regions and to bring about massive consequential shifts of population.

Thus far, very few developing countries have evolved policies and programmes based seriously on ensuring greater equity between regions. However, various programmes of expanding educational opportunities, particularly at secondary and post-secondary levels, have the effect of redistributing highly trained personnel throughout a country. Indeed, it can be argued that one of the most successful ways of redistributing this class of people and stimulating some degree of regional development is through establishing universities in disadvantaged parts of a country. Various developing countries have already done this, particularly where the structure of government is federal. The trend is then usually to have at least one university in each state and in this way to ensure a wider distribution of high-level manpower throughout the country. The most recent instance of this type of development with population redistribution implications is provided by Nigeria, where in 1975 it was decided to increase the number of universities from six to thirteen and to locate the additional seven in states that until then had none. As a population redistribution strategy, the location of universities also attracts middle-level and low-level manpower as well as a sizeable number of service population in the private sector. Similar emphasis on hospital development, in particular, the location of regional hospitals with diverse specialist departments, could have an equal population redistribution impact.

However, the location of industries is often regarded as perhaps the most effective way of achieving social equity between regions. This type of policy is usually pursued through programmes designed to remove natural or social handicaps of particular regions by means of subsidies to industrial activities willing to move there, while at the same time improving the industrial environment through creation of the necessary external economies. Considerable sophistication has been gained in most developed countries as to the relative efficacy of various types of subsidies in achieving such objectives. Among developing countries, Brazil has had quite extensive experience in the use of subsidies to attract industrial enterprises to its disadvantaged north-eastern region. Recent evaluation of the policy of subsidies, however, highlights the problems arising from the vertical institutional organization of the usually multinational enterprises receiving these subsidies and their difficulties in identifying effectively with the disadvantaged region to the point of having negative, instead of positive, impact on their growth.[24] For instance, some of the large organizations might receive the subsidy and only establish a nominal presence in the disadvantaged areas, thereby having minimal employment impact. Various Governments are therefore exploring ways of directly relating the subsidies to employment and of making it more difficult for enterprises to siphon away too much of the regional surplus generated, so that this surplus can be used further to stimulate growth, retain local population and attract immigrants.

The creation of external economies involves a wide range of activities, not the least of which is the development of industrial estates, sometimes even with factory buildings in place. The provision of such industrial infrastructure, along with transportation and communications facilities, water-supply and effluent disposal systems, reduces substantially the establishment or relocation costs to industries. In many instances, external economies are extended to the provision of a wide range of educational facilities for families at different stages in their life cycle, health and recreational amenities and housing to satisfy the needs of the various social and income classes.

It must be obvious from all that has been said so far that the social-equity objective in regional development has a tremendous potential for bringing about major population redistribution, or at least stabilizing existing distribution patterns, in most countries. The social argument, in fact, is closely related to the economic argument of efficiency in the use of resources. Indeed, to the extent that it emphasizes the need to offer various types of incentives, it can be seen as also arguing for a more efficient use of the labour resources of a country through effective population redistribution. However, the equity argument goes beyond that of economic efficiency in calling attention to the share of individuals, social classes, urban and rural areas and different regional units in the distribution of opportunities both for production and consumption. The correlation between the two objectives consequently need not always be positive and depends upon the relative values of income and its substitutability within the income-leisure scale of choice.

D. Administrative arguments for intervention

The social arguments for intervention presume that the provision of services to different parts of a country has no management costs and overlooks implications for the size of population necessary to make such provision feasible and viable. For many services, it is known that there is a minimum threshold size below

[24] See A. Gilbert and D. E. Goodman, "Regional income disparities and economic development: a critique", in Alan Gilbert, ed., *Development Planning and Spatial Structure* (London, Wiley, 1976), pp. 113–141.

which it is virtually impossible to provide them without some major modification which may in fact change the very character of the service. For many also, it is claimed that there is a ceiling above which diseconomies of congestion make it no longer realistic to operate. Between these two levels lies a happy medium or optimum relating to particular size and density of population. However, it is difficult to pin down the actual level of this optimum. All of these levels in turn are greatly affected by current technological capability; but beyond a certain point, automation in the delivery of service begins to induce various symptoms of alienation and anomie.

It has been more usual to examine the administrative argument in support of government intervention to influence population distribution mainly with regard to the growing costs of managing large metropolitan centres. Here, it is generally conceded that beyond a certain size, cities become almost unmanageable. Yet, as Thompson noted:

> "The city size at which increasing public service costs first turn sharply upward is probably, in large measure, a matter of the current level of urban technology. While the state of the arts in such diverse fields as urban transportation, communication, governmental decision making, and personnel administration is common to all urban areas—for knowledge is freely available—the competency and creativeness of various sets of local public officials are not nearly so uniform. And it is the local public officials, elective and appointive, who are the principal instruments of urban efficiency, together with the private managers of a few key local industries, such as the utilities, banks, and local transportation and communication systems."[25]

None the less, regardless of whether the point at which diseconomies set in can be clearly and scientifically identified, Governments in many countries begin taking decisions to slow down the growth of such metropolitan areas through an attempt to blunt the sharp edges of their attractiveness for new industries and enterprises. Many developing countries are already reaching that stage with regard to the population concentration in their primate metropolitan areas, which continue to attract a disproportionate share of the population and compel the Government to take up increasingly expensive technological options, particularly in the area of transportation, water-supply and sewage disposal.

For many developing countries, the real administrative challenge probably exists at the other end of the scale. In Africa, in particular, there are many areas of sparse population distribution with the people living in small, dispersed settlements, which makes the provision of various higher order services virtually impossible. Some of these countries—notably Kenya, Nigeria (Katsina Province) and the United Republic of Tanzania—have engaged in the villagization of the population. In many more cases, the Government has been indifferent to, but not against, spontaneous internal colonization movements from the densely to the sparsely populated areas. However, it is doubtful that if a Government were seriously to set about mobilizing the country as a whole for development, it would be able to escape taking a firm hand in helping to direct the streams of population movements to regions where administrative exigency makes it necessary to encourage a greater concentration of population.

This type of necessity is, of course, more obvious where population distribution is part of an overall defence strategy or is used as a means of dealing more effectively with insurgency or in order to be able to cope better with refugees from other countries. Few countries have had to redistribute population in recent times for reasons of defence. The most outstanding example has been Israel, where the policy of establishing settlements in the frontier regions is part of a strategy to secure the boundaries of the country. In other instances where there are disputes with regard to the position of the boundaries, it is easy to appreciate the attraction of similar policies for population distribution.

Malaysia provides an example of a country where population distribution was used as a means of dealing with insurgency. Between 1949 and 1954, some 440 villages were established, of which some 57 per cent were entirely new and located in areas where they could easily be administered and supervised. Altogether over 500,000 people or nearly 78,000 families were involved, of whom 87 per cent were Chinese, 7 per cent Malays and 4 per cent Indians. One article[26] states that one of the primary objectives in establishing the resettlement villages was to sever the close ties between the armed insurgents in the jungle and the unprotected and dispersed rural population. However, these villages, because of the opportunities they provided for the supply of electricity, piped water for domestic purposes, water-borne sewerage system, educational and other social facilities as well as better housing, became a model for later development efforts by the Government when the country became independent.

The resettlement problem of refugees has been growing in intensity and scale in different parts of the developing world in recent years. The search for a viable political system in many countries has been the cause of social conflict and strife, which has usually resulted in the mass exodus of entire families into neighbouring countries. Very often such refugees are seen as short-term residents who will return to their country as soon as conditions there return to normal. Even when the period of stay goes on for years, the hope that it is of limited duration impedes assimilation into the host society. However, where such hope does

[25] Wilbur R. Thompson, *A Preface to Urban Economics*, published for Resources for the Future, Inc. (Baltimore, Maryland, Johns Hopkins Press, 1965), p. 25.

[26] Hamsah Sendut, "The resettlement villages in Malaya", *Geography*, vol. 47, part 1, No. 214 (January 1962), p. 45.

not exist, the resettlement of refugees offers opportunity for directing population into regions where their presence could have effective impact at the margin.

E. Political arguments for intervention

For many developing countries, one of the most important issues that development is expected to resolve is the achievement of greater ethnic integration and national unity. This issue is of special significance, especially in countries of Africa where ethnic plurality is a common characteristic. It is of less significance in Asia, although there it takes on racial and caste overtones. Even in Latin America, where the Iberian heritage gives a high degree of cultural and ethnic homogeneity, the problem of native Indians and the former slave black population presents unique problems. In all of these situations, the tendency for freedom of movement to be constrained because of race or ethnic background poses serious challenges, especially as such movements represent rational responses to the process of economic development.

Yet, in many developing countries, there has, in recent years, been a growth of "nativist" reaction to migrants and the descendants of migrants who have moved from other cultural-linguistic regions. In India, for instance, between 1931 and 1961, the number of persons living in states other than their own had grown from less than 6 million to some 23.7 million.[27] By 1971, the figure had risen even more phenomenally to over 170 million. With this growth in number had come changes in attitudes of people in each cultural-linguistic region towards themselves and towards so-called "outsiders". In state after state, especially in such places as Assam and Maharashtra where the proportion of migrants is high, there have been demands for ordinances and legislations to restrict the opportunities and cultural position of migrants, to impose upon them domicile regulations for employment, housing; and admission into universities, medical schools and engineering colleges; to insist on language or residence requirements for employment in the universities and state bureaucracies, and to limit the granting of licences to the entrepreneurs among them.

This growth of "nativist" sentiments runs counter to the whole conception of common nationality. The right to migrate within India is, for instance, clearly guaranteed in the Indian constitution, which specifies that all citizens "shall have the right to move freely throughout the territory of India" and "to reside and settle in any part of the territory of India".[28] The constitution also provides that those who move can retain their regional identity by permitting their children to attend schools conducted in their own regional language. What is perhaps equally significant about the rise of such sentiments is that they have tended to be articulated largely by middle-class youths in cities and to be directed more against middle-class than working-class migrants. Little opposition has been expressed towards factory and construction workers, rickshaw pullers and other working-class migrants; but there is considerable opposition to so-called "alien" businessmen, professionals, clerks and other middle-class migrants.

Most state governments in India have tended to give residents preferences in government employment and to restrict admission of out-of-state residents to colleges and universities, especially to engineering and medical colleges. However, the impact of restrictions on employment in the private sector has been difficult to ascertain. Moreover, there is as yet no evidence that either political agitations or government restrictions have had any noticeable effect on interstate migrations, though it seems likely that some areas of the country will be affected if they have not yet been.

The rise of "nativist" sentiments and their negative implications for efforts at national integration and unity are not peculiar to India. They were among the causes of civil war in Nigeria in the late 1960s and remain a threat to the unity of most multi-ethnic countries. None the less, their effect on population distribution is not easy to estimate, especially as in most countries geographical mobility under the pressure of economic necessity tends to be so substantial as to blunt the edges of "nativist" agitations and local restrictions. Indeed, few countries have had much success in regulating the internal movement of people either for these or other reasons.

Notwithstanding, it is necessary to keep such disruptive tendencies under control as much as possible, particularly as the need for national integration and unity tends to grow hand-in-hand with the progress of economic development. While it cannot be denied that local authorities or state governments in a federation have a primary responsibility to see to the welfare of their population, central Governments also have a far higher obligation to ensure that this task shall not be done at the expense of the stability and integrity of the country. Government intervention to emphasize those laws and regulations which strengthen the rights of common citizenship and protect individuals or groups of individuals against acts of discrimination can thus be potent instruments influencing the distribution of population within a country.

Conclusion

The pattern of population distribution currently found in many developing countries has been described as "immature".[29] Immaturity has been characterized as a situation in which there is a mismatch between the distribution of resources and population. Such a mismatch is the product of changes in the technological and organizational relations linking a people to their natural environment. For many developing countries, the mismatch arises because while

[27] M. Weiner, loc. cit.

[28] *Constitution of India*, 1947, article 19.

[29] Keith M. Buchanan and J. C. Pugh, *Land and People in Nigeria* (London, University of London Press, 1956).

population distribution remains largely the product of a pre-industrial, pre-colonial and colonial past, the range and disposition of resources have been greatly enlarged by modern knowledge and technological capabilities.

The ability to achieve a new and more mature relationship between the disposition of resources and population is heavily constrained by the strategy of development adopted in many developing countries. This strategy remains largely outward oriented and places undue emphasis on capital investment in projects designed either to guarantee the ability of a country to continue to export commodities determined by its erstwhile colonial masters or to manufacture goods not directly related to the demands of the vast majority of its population. The strategy, in consequence, has placed little premium on the effective and comprehensive mobilization of the total population nor on a full-scale utilization of available resources. In the past few years, the weaknesses of this strategy of development have been becoming more and more evident and there is growing consensus that it has to be replaced by a new strategy which offers the masses greater opportunities for self-improvement.

The basic features of this new strategy are its insistence on drastic reduction in overall poverty levels, unemployment and inequality through means that emphasize increasing self-reliance on the part of peoples in these countries. According to Seers, self-reliance would necessitate that the crucial targets for development planning become: "(i) ownership as well as output in the leading economic sectors; (ii) consumption patterns that economised on foreign exchange (including imports, such as cereals and oil); (iii) institutional capacity for research and negotiation; (iv) and cultural goals . . ., depending on the country. . . ".[30] Put in such a bland way, it is not easy to appreciate the wide-ranging significance of a strategy of self-reliant development for population distribution. A little reflection, however, reveals that effectively to mobilize the population for a full-scale utilization of their resources implies the ability of the Government to induce movement of people to areas of the country where their labour is likely to be most productive. From this point of view, the future of most developing countries augurs to be one in which population mobility is bound to be even greater than it currently is and the most cogent argument in support of government intervention in the process will be that it is vital to the whole thrust of their development.

[30] Dudley Seers, "The new meaning of development", *International Development Review*, vol. XIX, No. 3 (1977), p. 5.

Part Two

GOVERNMENT INTERVENTION IN POPULATION DISTRIBUTION

III. POPULATION DISTRIBUTION POLICIES: THE NEED FOR CAUTION

*Koichi Mera**

This paper presents an argument not necessarily against government intervention in the spatial distribution of population but rather an argument for a cautious approach to the issue. Naturally, the justification for government intervention in the spatial distribution of population and related phenomena, including the size distribution of cities, crucially depends upon the objectives to be pursued. It will be argued that most government intervention undertaken so far has been characterized by: (*a*) insufficient knowledge, i.e., ambiguous notions about the objectives to be achieved and lack of reliable knowledge about the likely impact of each specific policy instrument; (*b*) programmes too expensive to justify direct intervention even when the objectives are clear and the causal relationships are known; and (*c*) the existence, in many cases, of more efficient ways to achieve the same objectives than direct policy instruments for spatial redistribution.

A. Government objectives and instruments for intervention

Before initiating the discussion of the merits and demerits of government intervention in the spatial distribution of population and related activities, it is necessary to define the various types of government objectives and direct policy instruments related to spatial distribution.

In most developing countries, two regularities are observed: (1) the urban population is growing at a faster rate than the rural population; and (2) large cities are on the whole growing at faster rates than medium-sized or small cities.[1] In other words, there is continuous net migration from the rural areas to small and medium-sized cities, and then to large cities. The principal reason for these migration flows is considered to be economic: in general, large cities provide better earning and employment opportunities.[2] As a result, predominantly rural, and often peripheral, regions tend to lose population in relation to others and to stagnate economically. Most Governments regard these trends as undesirable and set the following objectives with respect to spatial distribution of population and activities:

(*a*) To maintain the *status quo* in patterns of distribution;

(*b*) To equalize the distribution of population and activities among all regions within a country.

The first objective is, of course, modest; the second is more demanding.

Even the first objective is directed towards the elimination or reduction of migration among regions. Indeed, the true objective is not to eliminate migratory flows as such, but to eliminate the need for migration.

Although the first objective is not directed towards raising the level of development in the less developed regions in relation to that of the more developed, but rather towards preventing existing disparities from expanding, the second objective is to attempt to narrow and eventually to eliminate disparities by redistributing population and economic activities more evenly among regions. Thus, the objective is often to establish a viable city or cities of considerable size in less developed and less urbanized regions. Growth-pole concepts as proposed by Boudeville[3] are representative of such programmes.

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[1] According to the World Bank, out of 92 developing countries for which the growth rates of population as a whole and of urban population during 1960-1970 are documented, 91 countries had a higher rate of urban population growth than total population growth. The only exception was the Niger, in which urban population grew at 2.4 per cent, while the total was at 3.0 per cent. As to the growth of large cities, of 61 countries for which figures are presented, the growth rate of the "principal city" exceeded that of urban population in 37 countries and the two were equal in three countries. However, for the 21 cases in which the growth of the principal city was below the growth of urban population, it appears that the growth of the principal city is often underestimated due to the rather restricted jurisdictional boundaries of that city. World Bank, *World Bank Operations: Sector Programs and Policies* (Baltimore, Maryland, Johns Hopkins University Press, 1972), pp. 478–481.

[2] A number of case studies are surveyed in Pamela Briggs, "Some economic interpretations of case studies of urban migration in developing countries", World Bank Staff Working Paper, No. 151, Washington, D.C., March 1973, and Lorene L. Y. Yap, "Internal migration in less-developed countries: a survey of the literature", World Bank Staff Working Paper, No. 215, Washington, D.C., September 1975.

[3] Jacques Raoul Boudeville, *Problems of Regional Economic Planning* (Edinburgh, Edinburgh University Press, 1966). For discussions of these concepts, see Niles M. Hansen, "Development pole theory in a regional context", *Kyklos*, vol. 20, fasc. 4 (1967), pp. 709–725; *idem*, "An evaluation of growth center theory and practice", *Environment and Planning*, vol. 7, part A (1975), pp. 831–832; D. F. Darwent, "Growth poles and growth centres in regional planning: a review", *Environment and Planning*, vol. 1, No. 1 (1969), pp. 5–31; and J. R. Lasuen, "On growth poles", *Urban Studies*, vol. 6, No. 2 (June 1969), pp. 137–161.

In practice, the Governments of most developing countries appear to hold simultaneously these two objectives. However, the emphasis placed on each objective varies from one country to another.

The second objective usually implies that people should be moved from highly developed and more densely populated regions to less developed and less populated regions, e.g., in the Republic of Korea, from metropolitan Seoul to rural peripheral regions. This is so because "development" is usually associated with agglomeration of population and to develop a region requires an infusion of population.[4]

To achieve these objectives, Governments often intervene through policy instruments directed towards the market-oriented interregional flows of population and activities. Direct policy instruments for influencing the spatial distribution of population and economic activities are defined to be those government activities primarily intended to achieve either of the two spatial distribution objectives. Of course, virtually any other governmental policy can have some impact on migration. However, the primary objective in these cases is not to influence the pattern of population distribution; and, therefore, these policies are not here considered to be a direct instrument of intervention.

B. Insufficient knowledge about the problem

Any policy instrument used by a Government to achieve a specific goal will not necessarily succeed as intended, but may lead to unintended and even undesirable consequences. This problem of uncertainty or ignorance of programme impact is particularly important for spatial problems because regions are largely open systems; and, therefore, any measure of the Government may be countered not only within the region but by those in other regions.

An industrial dispersal policy, such as is found in a number of countries, can be based on a "carrot-and-stick" approach, i.e., a ban on industrial investment in highly developed areas and a subsidy in less developed areas. For such a policy to be effective, the degree of subsidy must be substantial. If it falls short of the effective levels, however, prospective industrial investment from foreign countries may not take place in the country and potential domestic investment may not materialize. Potential foreign investment may shift to another country where policies are more permissive, even if market conditions are less desirable. Even if the subsidy is heavy enough to attract the investment, inefficiency in production and distribution promoted by the subsidy could reduce the overall productivity of the economy of the country and could adversely affect long-run growth prospects.

Any policy measure should be adopted upon examination of the following elements: (*a*) identification of the objectives to be achieved; (*b*) identification of one or more policy measures for achieving the objectives; and (*c*) prediction and evaluation of the likely consequences of adopting each of the measures or their combinations. In many cases, spatial measures are adopted without going through the third process in which unintended as well as intended consequences are predicted and evaluated. In adopting spatial measures, the possible trade-offs between intended and unintended impacts should obviously be examined carefully.

Consider a "green-belt" programme as a spatial policy instrument. This measure is considered to be a device to contain the expansion of the city population within a certain area and to preserve natural environment in the vicinity of a large city. However, as in the case of Seoul, where such a policy is strictly enforced, urbanization is taking place immediately outside of the green belt. Although the measure may have reduced the population growth of the Seoul metropolitan area, the net impact is more likely to disperse the population within a larger metropolitan area. The question is whether this development is the desired consequence.

From the point of view that the incremental population has been shifted from the "special city" of Seoul to other local administrative units, it can be said that the measure achieved the redistribution objective. From the national or interregional perspective, however, it did not achieve the objective. In addition, there are other relevant criteria. In terms of reducing the total traffic demand within the metropolitan region, it probably did not help but rather exacerbated the situation. In terms of preserving agricultural land from urban encroachment, the effect was adverse. Given all these considerations, it is clear that the green belt failed to contain the population of the metropolitan area to a certain size.[5]

Among various theoretical and empirical arguments against urban concentration, those based on externalities are worth particular attention, as they are based on sound economic reasoning. First, one may take an example of urban externality based on traffic congestion. The reasoning is as follows: if a demand for traffic for a given highway increases beyond a certain point, the marginal cost per trip increases sharply. However, highway users pay, in terms of out-of-pocket costs and their time, only the average costs. Similarly, the prospective urban resident does not see the true social cost of his migration. The true social cost may be very much larger than that experienced by the migrant, which is the average cost.

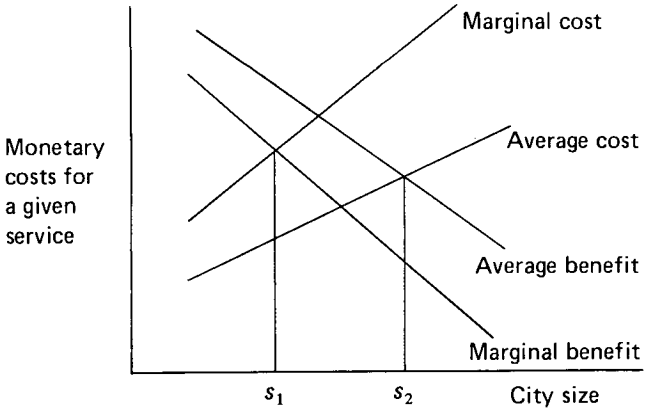
[4] Sometimes, however, highly populated regions are not highly developed regions. This relationship is found between Java and the outer islands in Indonesia, where the desired direction of migratory flows is from lower to higher income regions and not from higher to lower income regions as is usually the case. Nevertheless, in this case, the desired direction of migratory flows is from highly populated to sparsely populated regions and is thus consistent with the definition of the objective.

[5] Koichi Mera and Byung-Nak Song, "Spatial policies for population in the context of economic development: the case of the Republic of Korea", paper presented at the World Regional Development and Planning Conference, University of Tsukuba, Ibaraki, Japan, August 1978.

Therefore, the city has a built-in mechanism to grow beyond its optimal size.[6]

The relationships described above are shown in figure I. On the assumption that, beyond a certain population size, the marginal cost of providing basic services begins to increase, and that the marginal benefit obtainable begins to decline, the optimal population size for old-time residents is at s_1, which is given by the intersection of marginal cost and marginal benefit. The city, however, tends to increase in size to s_2 because migrants do not perceive marginal costs and benefits, but rather average costs and benefits.[7]

Figure I. Marginal costs and marginal benefits according to city size



If this is a realistic representation of consequences of urban growth in actual developing countries, a strong case can be made for the Government to intervene in the growth process.[8] Some device, such as congestion pricing, which would impose a tax on new entrants so that they would pay an amount equal to the marginal costs, may have to be introduced. Alternatively, the growth of a city may have to be limited by physical control on land use and building.

This argument, however, is highly dependent upon the assumption that, as the city grows, the marginal cost increases and the marginal benefit declines. Even in the case of highway traffic, the simple assumptions with which this argument is made do not necessarily hold. When a city grows in population and the traffic demand grows accordingly, highways would be expanded or new highways would be built, or both. The constancy of the highway network does not hold as long as the city government acts reasonably rationally. Therefore, the relevant analysis is not short-run comparative static analysis but a long-run comparative dynamic analysis.

It may be argued that the "new urban economists"[9] have conducted such analyses and it is indeed true that they have tried to settle this issue. They have accurately demonstrated that market prices in a city tend to distort the allocation of resources and consequently large cities tend to grow larger. However, the direction of actual distortion may not be as they claim. Even within the transportation sector, for example, the problem is not clear-cut. Their assumption is that a single technology exists in the transportation sector. However, there are several possible modes of transportation, some of which are better suited to small cities and others to large cities, but this selection is not considered in the analysis. It is noteworthy that in rapid rail transit the increase in marginal costs is much less pronounced than it is in motor-car transport. Also, when the city grows, the density of development increases accordingly. Therefore, the benefits of a unit transportation service, measured by a ton-mile or a person-mile, increase because a greater number of destinations can be reached by a fixed length of trip.

In addition, although "new urban economists" usually consider mononucleated cities, actual large cities tend to be multinucleated: they contain more than a single centre in which significant proportions of the urban employment are located. This structure avoids some of the cost of excessive concentration. Therefore, it is doubtful that the actual, not hypothetical, city has indeed a built-in mechanism to grow beyond its optimal size, even if transportation costs alone are considered.

The strongest argument against the externality theory of excessive urban growth can be made on the basis of agglomeration economies, which are not fully taken into account by the "new urban economists".[10] Moreover, the empirical evidence does not very clearly support the new urban economists. Although it is indeed true that the average costs per capita of city population increase as the city population grows, after the city reaches a certain size, the average benefits also increase and the increase of benefits outweighs the increase of costs.[11]

The approaches used in the empirical research vary considerably. Some are based on the simple compari-

[6] This argument is typically made by A. Dixit, "The optimum factory town"; and by Y. Oron, D. Pines and E. Sheshinski, "Optimum vs. equilibrium land use patterns and congestion toll", *Bell Journal of Economics and Management Sciences*, vol. 4, No. 2 (Autumn 1973), pp. 637–651 and 619–636, respectively.

[7] Harry W. Richardson presents a figure that includes the declining marginal-cost and increasing marginal-benefit ranges of city sizes. *The Economics of Urban Size* (Farnborough, Saxon House, 1973), p. 11. Figure I of the present paper illustrates only the critical range of city sizes.

[8] One may argue that the distribution of benefits and costs is markedly different between old-time residents and new entrants, the latter group receiving less than average benefits and also paying less than average costs. In this case, the degree of deviation from the average needs to be questioned.

[9] Beginning with Robert M. Solow, and William S. Vickrey, "Land use in a long narrow city", *Journal of Economic Theory*, vol. 3, No. 4 (December 1971), pp. 430–447.

[10] A. Dixit, loc. cit., takes account of economies of scale in production as well as diseconomies of congestion. Through numerical analyses he came to the conclusion that cities with over 1 million population are difficult to justify in the framework considered.

[11] As demonstrated by, among others, William Alonso, "The economics of urban size", *Papers and Proceedings of the Regional Science Association*, vol. XXVI (1971), pp. 67–83; and Koichi Mera, "On the urban agglomeration and economic efficiency", *Economic Development and Cultural Change*, vol. 21, No. 2 (January 1973), pp. 309–324.

son of per capita income and per capita basic service costs, which may be challenged as the concepts used are rather crude. Other work is based on estimated production functions. This approach helps to reveal the relative efficiency of resources used in cities of different sizes. Most such studies[12] conclude that the productive efficiency of resources continues to increase with the size of the city. The only apparent exception is an analysis that refers only to the manufacturing sector.[13] For that particular sector the author concludes that the optimal city population size is about 6 million—not in itself a particularly small number.

Moreover, many analysts[14] have found that the tertiary sector has agglomeration economies which grow with the size of the city much beyond those of the manufacturing sector. Therefore, if all the sectors are considered together as necessary components of a city, the optimal size must be greater than that found for the manufacturing sector alone.

Another approach to the problem is to relate the urban concentration to economic growth.[15] An analysis of the performances of a group of developing countries indicates that, by and large, those countries which showed an increasing concentration of population in the largest cities recorded a higher growth rate of gross domestic product.[16]

Therefore, little evidence exists that the overall marginal benefit of population increase in large cities declines for the size range of cities observed currently. The argument of excessive urban growth of the "new urban economists" based on increasing marginal cost and declining marginal benefit does not have a reliable empirical basis. This conclusion has an important implication. The marginal benefit curve may never intersect with the marginal cost curve within the feasible range and the optimal size may be beyond any size achieved thus far anywhere in the world. If so, the correct policy orientation is to encourage the growth of large cities rather than to restrict it. Therefore, the correct policy instrument may be to subsidize inmigrants rather than to tax them.

[12] See, for example, Koichi Mera, "Regional production functions and social overhead capital: an analysis of the Japanese case", *Regional and Urban Economics*, vol. 3, No. 2 (May 1973), pp. 157–186; David Segal, "Are there returns to scale in city size?", *Review of Economics and Statistics*, vol. LVIII, No. 3 (August 1976), pp. 339–350; and Anthony M. J. Yezer and Robert S. Goldfarb, "An indirect test of efficient city size", *Journal of Urban Economics*, vol. 5, No. 1 (January 1978), pp. 46–65.

[13] T. Kawashima, "Urban agglomeration economies in manufacturing industries", *Papers of the Regional Science Association*, vol. XXXIV (1975), pp. 157–175.

[14] Including K. Mera, "Regional production functions and social overhead capital".

[15] As is done in K. Mera, "On the urban agglomeration and economic efficiency".

[16] A current ongoing research project undertaken by the present author shows, from an analysis of data of developing countries during the most recent decade, that the growth of large cities has coincided in general with more rapid than average socio-economic growth of the country. This relationship is particularly notable for countries that had achieved a minimum level of per capita income (e.g., $200 in 1960) and a minimum level of urbanization (e.g., 20 per cent in 1960).

To sum up the foregoing discussion, it can be said that in a number of cases in which a direct policy instrument for altering spatial distribution of population and activities is implemented or is recommended for adoption the objectives are not clearly identified or the impact of the instrument is merely assumed and not based on sound theoretical and empirical knowledge, as is found in the controversy concerning optimal city size. Therefore, many of those direct policy instruments have not achieved the intended objective adequately or have induced unintended, undesirable consequences which more than offset the achievement of intended objectives. Thus, caution is called for before adopting direct measures for intervening in the market-oriented spatial distribution of population and related activities.

C. Cost of government intervention

Direct measures for intervening in the spatial distribution of population may be grouped as follows:

(*a*) Land-use controls;

(*b*) Geographically selective licensing and subsidies;

(*c*) Geographically selective infrastructure of provision;

(*d*) Direct urban development.

Each of these categories is discussed below with respect to the costs of intervention and the possible benefits.

Land-use controls

If the future spatial distribution of population and activities are to be regulated by land-use controls, such controls must be rigorously enforced. Otherwise, land-use controls are merely nominal, without benefits or costs, save the administrative costs of initiating and maintaining them.

One may consider an example of rigorous land-use controls. If the controls are to exclude certain or all activities from specified areas, such as green belts, they have the effect of shifting land use from the specified areas to adjoining areas, as discussed above. In some cases, they may have the effect of negating the emergence of some activities altogether. In the case of locational shifting, the additional costs incurred by shifting, in terms of larger travel distances and highways, would not be offset by the additional benefits of having a green belt around the city as its primary objective is to restrict the growth of the city. If the green belt is large enough to eliminate some of the potential industrial activities which would otherwise have emerged, costs in terms of less employment and less production would be significant.

Consider, then, land-use control that is directed towards determining the spatial pattern of some set of activities, such as industry. For the control to be meaningful, it should be directed towards a pattern of activities that would not be realized by free, individual

decisions. If the activities controlled have external effects on a regional or national scale, the control may be considered to have a reasonable justification. Usually, direct external effects are limited to neighbourhoods. The only possible justification for intervention in interregional distribution would be the distribution of income.

Through redistribution of some activities, such as industry, the regional distribution of income can be varied. Thus, there is a good reason for tight land-use controls. However, achievement of the objective through tight land-use controls requires prohibition of certain activities in the areas where they are expected to grow when the controls are not introduced. Moreover, with the controls, they do not grow in those desired areas and may not grow anywhere at all. Such is the cost of tight land-use controls.

Geographically selective licensing and subsidies

Geographically selective licensing has effects similar to land-use controls, but could be more flexible, because licensing can refer to various factors which cannot be taken into account in the case of land-use controls. Therefore, through selective licensing some of the costs of land-use controls may be avoided. For example, those industries which will not be sited except in specific selected locations could be allowed to locate according to their preference because the alternative would be the loss of the industries. Such a process, however, involves a substantial discretionary element. One implication of such discretionary intervention is the concentration of power with the central Government. This fact alone might have undesirable consequences, quite apart from the greater risk of corruption. The concentration of governmental power itself may have the effect of expanding the size of capital cities, which is the very consequence against which spatial policies have been devised.

A geographically selective subsidy programme is similar to that of licensing, but it would be more effective in redistributing activities to a desired pattern. The major goal is to achieve a more desirable spatial distribution of activities and income and the case may be strengthened if subsidy programmes are considered to be temporary, i.e., applied only until sufficient momentum for development is built up in the target areas.

When a subsidy programme is not combined with license control or prohibitions through land-use controls, the cost of the programme will not go much beyond the cost of subsidies themselves because it will not eliminate those activities which would otherwise emerge. It is merely a question of the choice of location or of the emergence of additional activities at the cost of the subsidy. If the cost of subsidy is large, then obviously the cost of intervention is large. Desirable subsidy programmes are, therefore, those of limited duration, such as corporation profits tax exemptions for a certain number of years. However, despite the efforts of many Governments to decentralize industries through such measures, little has been achieved.

Geographically selective provision of infrastructure

The provision of infrastructure such as highways and reservoirs in selected geographical areas is probably the most frequently used measure for intervening in the spatial distribution of population and activities. Because the provision of infrastructure is well within the responsibilities of the public sector, the act of infrastructure provision itself cannot be challenged. The question is what is to be provided in which location.

When a specific infrastructure is provided to meet the existing or expected demand, it is not considered a direct measure of intervention because its primary objective is not either of the two objectives defined in the second section. It is a direct measure of intervention when it is intended primarily to alter the trend in the spatial distribution of population and activities.

One such example is the designation of "new industrial cities" in Japan during the 1960s and an increased provision of infrastructure to the designated areas. A recent analysis[17] shows that some designated areas grew at a rate greater than the national average; but, on the whole, the designated areas grew at a rate not significantly different from the national average. The experience mentioned above is considered to convey the following lesson: because industrial development requires a number of conditions among which infrastructure is related to only some, the concentrated provision of infrastructure alone does not necessarily lead to accelerated growth of desired activities.

There are, of course, apparently successful examples, such as Masan and Ulsan in the Republic of Korea. These industrial cities grew because both are located on an accessible seacoast and the Government has made concerted efforts to attract a number of industrial establishments. Most importantly, these developments in the Republic of Korea were essential components of the drive to industrialization; the former for promotion of labour-intensive export industries; and the latter for promotion of the early phase of heavy industries. The proximity to Pusan, the second largest city, also helped their development. Conversely, inland industrial cities in the Republic of Korea are not as successful as those on the coast.[18] They are more representative examples of infrastructure provision intervening in market forces. Even in a country where industrialization has been phenomenal, this approach has been fraught with a number of difficulties.

In a country where the rate of industrialization has

[17] Koichi Mera, "The changing pattern of population distribution in Japan and its implications for developing countries", *Habitat International*, vol. 2, No. 5/6 (1977), pp. 455–479. Many of the high-growth areas were located in the vicinity of the metropolitan areas of Tokyo and Osaka.

[18] See K. Mera and B.-N. Song, op. cit.

been less spectacular, such as Indonesia, even a well-located industrial city like Cilacap has not been successful. Despite an excellent port on a coastal location, Cilacap has not experienced much industrial development. Its port has been used extensively, however, as a distribution centre for selected commodities, which are controlled by the Government. An unsatisfactory result of such an approach is reported also for Pakistan.[19] Lastly, even in a country where the Government has had substantial control over the residence of people, as in China, a desirable spatial distribution of industrial development could not be achieved, and growth-propelling industries are concentrated in large cities.[20]

A lesson that can be learned by observing such attempts is that infrastructure provision as a means of altering spatial distribution of population and economic activities tends to be costly unless a development centre (the location in which population and activities are expected to make a substantial increase due to infrastructural provision) has economic viability, i.e., satisfies other conditions for development, such as access to reasonable public sector services and agglomeration economies, the supply of entrepreneurs and favourable natural conditions. The belief that any area can be made economically viable through sufficient provision of infrastructure might be true in the strict sense of the word but is not suited as a guide for policy making. A large amount of resources appears to have been wasted with this approach, as documented above.

Direct urban development

Direct urban development by the Government is well exemplified by the construction of a new capital, such as Brasilia or Islamabad. From a symbolic or political point of view, such actions may be justified.

However, the economic costs of such relocation are enormous. A new town development would require a much higher per capita infrastructure cost than incremental urban development. This increased cost is likely for three reasons. First, higher than average standards of services are usually the objective in building a new town. As this factor provides quality differentials, it does not imply that the true cost of a new town is higher. However, when the standards are set in excess of what the majority of people can afford—which appears to be usual—the new town can be said to be costly. Another factor is the limited scale of new towns. As has been discussed, the per capita cost of infrastructure declines with population size in a large range, including cities of 1 million.[21] Most new towns are designed to be much smaller. Lastly, the per capita cost of a new town is calculated on the basis of the target population. But the population growth tends to lag behind the set schedule, which implies that the calculated or announced per capita costs are underestimates. To the knowledge of the present author, no new town, other than new capital cities or suburban new towns, has ever experienced as much population growth as at first anticipated.

Another significant cost of a new town is the interruptions of activities during the period of transition. First, if government agencies are to be located in a new town, the abler government officials often tend to switch jobs to avoid the inconvenience and hardship expected in the new location. Thus, their positions are filled by less able persons. Secondly, the construction of a new town normally requires at least several years. During this period only a part of the integrated set of activities is in operation. The efficiency of operation is reduced by additional demands for transportation and communication, or by the lack of them, between the old capital and the new location. Even with additional transportation and communication inputs, sufficient communication cannot easily be achieved when two departments or sections are located at a distance. Thirdly, the new town needs time to mature. An enormous amount of effort is needed before new systems are established in the new location.

From a very long range point of view, such a move might be justified on the basis of the pattern of spatial distribution of population and economic activities. However, for those countries which are impatiently trying to achieve economic development, it cannot be recommended.

D. Alternative policies

The spatial distribution objectives described above in section A may also be achieved through indirect policy measures. The problem of concentration of population in some selected locations, e.g., large cities, is indeed a spatial phenomenon, but not necessarily caused by spatial factors alone. To the extent that it is caused by non-spatial factors, there is room for solving the problem through non-spatial measures.

One may consider the example of population concentration in large cities and loss of population from rural and less developed regions. As was observed quite some time ago,[22] this phenomenon is closely related to the degree of interregional income disparity. By and large, such population concentration takes place in countries where interregional income disparity is large. As to the latter situation, interregional income disparity intensifies as economic development pro-

[19] Peter M. Townroe, "The case for national urban growth strategy for Pakistan", Institute of Urban Regional Development Working Paper No. 276, Berkeley, California, University of Southern California, 1977.

[20] As reported by Thomas G. Rawski, "Industrialization, technology and employment in the People's Republic of China", World Bank Staff Working Paper No. 291, Washington, D.C., August 1978; and Chung-tong Wu, "Development strategies and spatial inequality in the People's Republic of China", paper submitted to the United Nations Centre for Regional Development Seminar on Rural-Urban Transformation and Regional Development Planning, Nagoya, Japan, 31 October–10 November 1978.

[21] K. Mera, "On the urban agglomeration and economic efficiency".

[22] Salah S. El-Shakhs, "City systems, primacy and development", *Journal of Developing Areas*, vol. 7, No. 1 (October 1972), pp. 11–36.

ceeds; but when it reaches a certain level, inequalities begin to decline.[23] Therefore, population concentration can be said to be a temporary problem, and the duration of the problem may be shortened by accelerating the growth of the economy. Thus, aggregate economic growth policy can be regarded as an alternative to direct spatial intervention policies.

The spatial impact of economic growth in Japan and the Republic of Korea is described by Mera.[24] During the 1950s and 1960s, when the economy was growing at a high rate, Japan was "suffering" the problems of population concentration in the Tokyo and Osaka metropolitan areas, and most less developed areas in the country were experiencing absolute population decline. However, the increase in employment opportunities accompanying economic development helped to reduce income disparity among regions and the high rate of population concentration abated.

A similar situation is found in the Republic of Korea, where "surplus labour" in the economy had been eliminated by 1967/68.[25] Interregional income disparities began to decline after 1968 and the trend of population concentration in the Seoul metropolitan area began to taper off. Subsequently, the Republic of Korea succeeded in reducing interregional income disparity at a much earlier phase of economic development than did Japan.[26] This case may be a better example for currently developing countries in that the achievement of spatial objectives through economic development did not require a century of patience, but was attainable within one or two decades.[27] A recent simulation analysis[28] also confirms this proposition for developing countries under diverse conditions.

Another non-spatial policy that would have a substantial spatial impact is environmental control. External diseconomies of pollution have their greatest impact in densely populated cities. These diseconomies tend to counteract the agglomeration economies generated in large cities. The existence of external diseconomies of pollution, therefore, tends to restrict the growth of large cities; and, therefore, the enforcement of pollution control helps to expand city size.[29] Although the quantitative aspects of this relationship have, to the present author's knowledge, not been found, the implication is puzzling. The control of pollution, which is usually considered a popular public policy, would prevent the achievement of spatial objectives. This statement does not necessarily imply that pollution should not be controlled but may suggest an appropriate timing for changing standards of pollution control.[30]

Two other non-spatial policies should be examined. The first of these is the industrialization policy. It is often said that the development of import-substitution industries tends to encourage concentration of industries in large metropolitan areas because they are oriented to more affluent urban residents and many of the inputs are imported in semi-processed forms. On the contrary, the development of export industries does not encourage population concentration to an equal degree, particularly when the export industries are based on domestic resources and/or do not require sophisticated skill. A more radical approach is to reduce trade with other countries, as was done in Sri Lanka. Accompanied by rural development policies, the country has succeeded in curtailing the growth of large cities.[31] However, the cost paid in terms of economic growth appears to be substantial.[32]

The second non-spatial policy focuses upon the degree of governmental power held by the central Government: great concentration of power in the central Government may be inevitable when skilled human resources are scarce; but it necessarily leads to spatial concentration of population and economic activities. As long as the spatial distribution objectives are im-

[23] J. G. Williamson, "Regional inequality and the process of national development: a description of the patterns", *Economic Development and Cultural Change*, vol. XIII, No. 4, part II (July 1965), pp. 1–84.

[24] K. Mera, "The changing pattern of population distribution in Japan and its implications for developing countries"; and *idem*, "Population concentration and regional income disparities: a comparative analysis of Japan and Korea", in Niles M. Hansen, ed., *Human Settlement Systems: International Perspectives on Structure, Change, and Public Policy* (Cambridge, Mass., Ballinger Press, 1978), pp. 155–175.

[25] This situation is well analysed by John C. H. Fei and Gustav Ranis, "A model of growth and employment in the open dualistic economy: the case of Korea and Taiwan", *Journal of Development Studies*, vol. 1, No. 1 (1975), pp. 32–63. Data in this article refer to the Republic of Korea and to Taiwan Province.

[26] As documented by K. Mera, "Population concentration and regional income disparities: a comparative analysis of Japan and Korea".

[27] It may be overly optimistic to anticipate that all developing countries will attain a satisfactory level of development within one or two decades. However, its feasibility largely depends upon the devotion of the country to the cause. Therefore, each developing country ought to pay serious attention to this course of action, at least before adopting an alternative and probably less certain course. According to a current and ongoing analysis by the present author, those developing countries which had a per capita gross national product of $250 or higher in 1975 have a good chance of improving socio-economic conditions through economic development and intensification of urbanization.

[28] Koichi Mera, "Basic human needs versus economic growth approach for coping with urban-rural imbalances: an evaluation based on relative welfare", *Environment and Planning*, vol. 11, part A (1979).

[29] As demonstrated by G. S. Tolley, "The welfare economics of city bigness", Urban Economics Research Report, No. 31, Chicago, Illinois, University of Chicago, 1969.

[30] Such timing is advocated by Perry Shapiro, T. Miyao and T. Smith, "Environmental quality and economic development", paper submitted to the World Regional Development and Planning Conference, University of Tsukuba, Ibaraki, Japan, August 1978.

[31] See Marga Institute, "National Development and rural-urban transformation: the Sri Lanka case study, part 1", paper submitted to the United Nations Centre for Regional Development Seminar on Rural-Urban Transformation and Regional Development Planning, Nagoya, Japan, 31 October–10 November 1978; and S. P. F. Senaratre and E. Wanigasekara, "A review of relevant national policies and programmes in respect of rural-urban relations in Sri Lanka", Working paper No. 78–05 submitted to the Seminar.

[32] Refer to Koichi Mera, "Industrial development strategies and rural-urban imbalances in Asia: selected case studies and an overview", paper submitted to the United Nations Environmental Programme/Economic and Social Commission for Asia and the Pacific Regional Seminar on Environment and Development: Alternative Patterns of Development and Life-styles, Bangkok, Thailand, 14–18 August 1979.

portant, attempts should be made to reduce the power of the central Government either by transferring some responsibilities to local governments or by deregulating some activities so long as other, more important, objectives are not sacrificed.

Among these alternative policies considered, at least the first, overall economic development policy, is considered to be an efficient way of achieving the spatial distribution objectives, if not in the short run then from the medium run to the long run. As to the choice of export and import-substitution industries, the overriding determinants would not be the spatial objectives but the economic viability of the alternatives. Reference to its impact on spatial development, however, should be made in the decision-making process.

Conclusion

As suggested in the foregoing discussion, the issues of spatial distribution of population and activities are, in many cases, not properly formulated. Even if they are, however, direct intervention measures tend not to be effective in achieving the very objectives to which the measures are directed, are often very costly in relation to what can be achieved or are inferior to alternative measures which are non-spatial. Nevertheless, it is not possible to discredit direct spatial measures of intervention altogether. Some of the highways or industrial city developments can be justified on the basis of achieving spatial distribution objectives without having much burden on the economy. There are some apparently successful examples, but even those cases might also have been justified on economic grounds alone. Thus, direct intervention measures in the spatial distribution of population and activities should not be devised as such but should be supplemental to other overriding objectives such as economic development.

This conclusion may be strengthened by the fact that economic development by itself leads to satisfaction of the spatial distribution objectives, if not immediately, then within a decade or two. The development experiences of Japan and the Republic of Korea support this proposition.[33] Spatial distribution objectives are largely social equity-oriented objectives. After an extensive analysis, Adelman and Morris[34] came to the conclusion that there is no reliable policy instrument which directly improves social equity. This conclusion may be relevant to spatial distribution objectives. Despite the dissatisfaction with the speed of the trickling-down processes of economic development which has been expressed by many concerned with development, economic development might, after all, be the only efficient and reliable policy instrument.

[33] See also Edwin S. Mills and K. Ohta, "Urbanization and urban problems", in Hugh Patrick and Harry Rosovsky, eds., *Asia's New Giant: How the Japanese Economy Works* (Washington, D.C., The Brookings Institution, 1976), pp. 673–751; and Edwin S. Mills and Byung-Nak Song, "Korea's urbanization and urban problems 1945–1975", Korea Development Institute Working Paper, No. 7701, Seoul, September 1977.

[34] Irma Adelman and Cynthia T. Morris, *Economic Growth and Social Equity in Developing Countries* (Stanford, California, Stanford University Press, 1973).

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IV. EVALUATION OF SOME ARGUMENTS AGAINST GOVERNMENT INTERVENTION TO INFLUENCE TERRITORIAL POPULATION DISTRIBUTION

*Walter B. Stöhr**

Arguments against government intervention to influence territorial population distribution are raised either from a practical/political point of view or from a theoretical/consistency point of view. In the present paper they are discussed in this sequence although they are, of course, sometimes mutually interrelated, as will be seen. Furthermore, this discussion distinguishes between arguments concerning what may be called "adaptive" government intervention, as distinct from "normative" government intervention. The latter policy is divided into: (*a*) "facilitating normative"; and (*b*) "restricting normative" government intervention.

This organization appears justified inasmuch as both the practical/political and the theoretical arguments appear to differ with regard to these types of intervention.

A. Two types of government intervention to influence territorial population distribution: adaptive and normative intervention

Policies to influence the territorial distribution of population are usually thought of primarily in terms of interventions to bring the distribution of population in accord with the spatial distribution of economic opportunities. Although these types of policies are dealt with explicitly in the latter part of this paper, the topic should first be discussed within a broader context.

Changes in the territorial distribution of population usually take place in connection with functional changes in physical, social, political, technological or economic conditions. Such changes may either occur as a consequence of the functional changes or as an aid to facilitate them.

In the first case, changes in the territorial distribution of population are a consequence or an accompanying phenomenon of the functional processes mentioned: the distribution of the population will adapt to changes in climate or to the exhaustion of natural resources, to the emergence of new forms of social organization and ownership, to the acquisition or loss of territory as a result of war or treaty; or to new economic opportunities offered by the construction of railways or freeways, through industrialization, automation etc. Such adaptation can occur without government intervention through the spontaneous reaction of households and enterprises to these functional processes. On the other hand, they can be co-ordinated by governmental institutions at different spatial scales, e.g., at local, regional, national or supranational levels; by local or regional plans, national settlement policies, international migration policies etc. The latter policies are here termed "adaptive" government intervention to influence territorial population distribution, because they represent attempts to adapt the population distribution to the requirements of other societal processes.

However, government intervention in the territorial distribution of population can also take place in order to facilitate certain other societal objectives: Governments may try to settle new areas in order to exploit their mineral or agricultural resources; they may attempt to change existing settlement patterns in order to facilitate new forms of community organization, to change existing power structures or to utilize expected economic advantages of economic growth centres or of a more intensive utilization of rural resources. This type is termed "normative" government intervention to influence territorial population distribution. Whereas adaptive government intervention is a consequence of functional societal processes, normative intervention is a prerequisite or a facilitating condition of those processes. In the first case, functional societal change determines territorial change; in the second, territorial change guides functional societal change.[1]

On the whole, few arguments are raised against adaptive government intervention to influence territorial population distribution, but many arguments are given against normative intervention, both from a practical/political point of view and from a theoretical/consistency standpoint. Such arguments are levied against intervention for various reasons:

(*a*) It restricts the freedom of the individual in moving and choosing a residential and working location of his or her own free will, that is, in "voting with one's feet".[2] In this connection, the question must be raised whether and in which cases government intervention actually restricts this freedom, or in which cases this freedom is really only restored by such

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[1] John Friedmann and Clyde Weaver, *Territory and Function: The Evolution of Regional Planning* (London, Edward Arnold, 1978).

[2] Charles M. Tiebout, "A pure theory of local expenditures", *Journal of Political Economy*, vol. 64, No. 5 (October 1956), pp. 416–424.

intervention in the face of other (functional) societal processes—e.g., industrialization or changes in terms of trade—which themselves curtail individual freedom. This point is the focus not only of the practical/political but of the theoretical/consistency arguments;

(*b*) It disturbs an automatic equilibrium mechanism which would otherwise induce persons to move to locations where both their individual welfare and aggregate national efficiency would be maximized. This argument has been raised by neo-classical economists and by political liberals; it is analysed in section C mainly from a theoretical/consistency point of view;

(*c*) It primarily serves the interests of the ruling economic and political strata by making abundant and therefore cheap labour available in locations that best suit the interests of those strata; this practical/political argument has only very recently been levied overtly;

(*d*) It, in practice, is ineffective because of the pervasive influence of overall economic and political structures which relegate government intervention to influence territorial population distribution to a mere superficial action and an attempt to cure symptoms rather than addressing their underlying causes;

(*e*) It is ineffective because of the complexity of behavioural and deterministic factors governing population distribution which makes any intervention, short of complete government control over all interactions between individuals and enterprises, useless. In order to deal with these questions more systematically, the types of interventions are described below and are illustrated in figure II.

The types of government intervention to influence territorial population distribution and their objectives are:

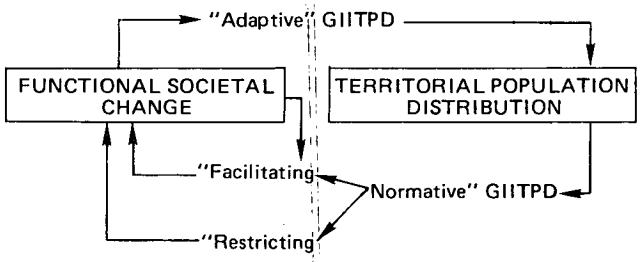
(a) *Adaptive intervention*: the objective is to adapt population distribution to the consequences of functional societal change, e.g., of industrialization, modernization, spontaneous growth centres;

(b) *Normative intervention*: the objective is to use government intervention as an instrument to influence the rate and direction of functional societal change;

(c) *Facilitating normative intervention*: the objective is to facilitate specific objectives of overall societal change;

(d) *Restricting normative intervention*: the objective is to control societal change to reduce disruptive effects.

Figure II. Types of government intervention to influence territorial population distribution (GIITPD)



B. Practical/political arguments concerning government intervention to influence territorial population distribution

Practical/political arguments against government intervention to influence territorial population distribution are levied mainly because of their socio-political consequences. On the whole, some of these arguments seem stronger than the theoretical arguments which usually occupy the foreground of public discussion.

Arguments concerning adaptive intervention

Adaptive government intervention to influence territorial population distribution usually takes place to ameliorate the effects of functional changes. If these changes occur in physical conditions and are abrupt, such as earthquakes or droughts, there is scarcely an argument against government intervention as it is obviously necessary physically and economically to protect the population concerned. The Government will usually even be called on to evacuate population to safer areas or to resettle it in more appropriate territorial patterns.

With respect to adaptations to long-term changes in the physical environment, such as climatic changes, desertification, periodic droughts or evacuation of periodic flood or earthquake areas, government intervention is usually also accepted or even required. The difficulties lie rather in the scientific capability of a reliable long-term projection of such danger areas, on the one hand; and in the actual political capacity for implementing such long-term adaptive policies in view of pressing bottle-necks of land and other resources in the short term, on the other. In few cases has it actually been possible to keep potential earthquake or flood areas free from settlement in developing countries, particularly if there is a great demand by the population (usually poor) for cheap land.

If functional change takes place in socio-economic structures, adaptive government intervention to influence territorial population distribution possibly finds more differentiated but still widely positive reaction. There is usually little objection, at least by the politically vocal population groups, against government intervention to influence population redistribution to facilitate the labour supply for rapidly growing metropolitan agglomerations or for other spontaneous growth centres,[3] nor to accompany the transition from traditional (tribal, *Gemeinschaft* type) forms of social organization with a decentralized territorial pattern to "modern" (functional, *Gesellschaft* type) forms with more centralized territorial patterns. Only recently have such policies been more vigorously protested by formerly non-vocal groups as they have

[3] William Alonso and Elliott Medrich, "Spontaneous growth centers in twentieth-century American urbanization", in Niles M. Hansen, ed., *Growth Centers in Regional Economic Development* (New York and London, Free Press, 1972), pp. 229–264.

become sufficiently mobilized either to oppose abrupt functional changes, such as rapid industrialization or modernization (e.g. the re-Muslimization wave in Iran), or to oppose the disruption of their natural or social environments as a consequence of functional changes (resistance against drastic resettlement policies in Democratic Kampuchea, Narita airport resistance in Japan etc.).[4]

One key question in this connection is whether such overall functional changes as rapid industrialization or modernization are to be given absolute priority over changes in the concrete territorial (natural, social) environments of local communities. Government intervention to influence territorial population distribution then serves at best to mitigate these consequences. The alternative would be to give territorial living conditions priority and to adjust the rate of functional change (industrialization, modernization etc.) to their requirements.[5]

A second key question is the extent to which the broad mass of the population, including those with poor access to social power, can bring pressure to bear upon government policy-makers. Usually, only a small minority of the population benefits, particularly in the initial phases, from large-scale functional changes, such as rapid industrialization and modernization. The satisfaction of the basic needs of the large majority of the population hardly improves because it is determined mainly by their immediate territorially defined environment which they can do little to expand, short of fleeing by migration.

Arguments levied against adaptive government interventions or rather against their underlying causes therefore depend to a great degree upon whether their results are considered from the point of view of a small minority benefiting immediately from rapid functional change or from the point of view of the remaining large majority of the population.

Arguments concerning normative intervention

Normative government intervention to influence territorial population distribution may serve: (*a*) to facilitate desired changes in physical, political or economic structures; or (*b*) to restrict such changes because of their negative effects upon the territorial living conditions of concrete local or regional communities.

In the first case, such normative intervention will, for example, attempt to redistribute population to facilitate the incorporation of new resource frontiers (Brazil, Canada, Union of Soviet Socialist Republics); to support migration to locations of new social organizations (e.g., the formation of Ujamaa villages in the United Republic of Tanzania or newly defined political and administrative capitals (e.g., Brazil, Nigeria, Pakistan and the United Republic of Tanzania); to settle sensitive political borders (Chile/Argentina, Brazilian interior borders etc.), or to facilitate the construction of large-scale territorial economic complexes (Soviet Union).

As a rule, few arguments are raised against such "facilitating normative" policies to influence the territorial distribution of population as long as the wider societal objectives are broadly accepted. Such large-scale objectives concerning major national transformations are actively pursued usually only in countries with a high degree of nationalistic and/or ideological mobilization and with a highly centralized decision-making system. Therefore, political arguments against them and against facilitating normative government intervention to influence territorial population distribution also have a low probability of articulation. There is no doubt, however, that from the point of view of the freedom of the individual substantial arguments would be levied against some of these interventions even if only indirect measures are used such as social pressure for migration, the option between changing location or losing the job etc. This aspect depends to a great extent upon the priority a society places on aggregate national or even supranational objectives as opposed to those of the individual, the family or the local community.

Normative government intervention, however, can also have the objective of restricting possible disruptive effects of social and economic functional change on the living conditions of territorially organized social groups. Such "restricting normative" intervention would, for instance, be designed to reduce migratory flows caused by large-scale industrialization or urbanization and to divert them to secondary or tertiary growth centres in order to reduce interregional disparities in income levels, to reduce environmental deterioration or to avoid social disintegration.

With regard to this type of restrictive normative intervention, there exists a wide array of positive and negative arguments and a great divergence of theoretical and practical responses. Restrictive normative government intervention to influence territorial population distribution occupies a special position as it often stands at the conflict juncture between objectives of territorial communities and large-scale functional organizations. This conflict may become particularly acute if large-scale functional organizations (e.g., multinational enterprises) bring about territorial disintegration through over-exploitation of territorially available natural resources, the introduction of inappropriate technology, the release of regional labour, environmental deterioration etc. This conflict

[4] A typical example of an "adaptive" government intervention to influence territorial population distribution is described in Organisation for Economic Co-operation and Development, *Migration, Growth and Development*, report of an Expert Group chaired by Professor Charles P. Kindleberger (Paris, 1979). Some negative experiences of countries in the Organisation for Economic Co-operation and Development are mentioned in section E of the present paper.

[5] Walter Stöhr and F. Tödtling, "Spatial equity—some antitheses to current regional development doctrine", *Papers of the Regional Science Association*, vol. XXXVIII, 1978), reprinted in modified form in Hendrik Folmer and Jan Oosterhaven, eds., *Spatial Inequalities and Regional Development* (Leiden, Nijhoff, 1978).

situation is similar to that between efficiency and equity in economics.

Some academic effort has been made to show that these different objectives, economic efficiency and regional equity, actually are in harmony rather than in conflict with each other, at least in the medium or the long term. The automatic divergence-convergence syndrome in spatial disparities is a typical case in point. Some related theoretical questions are dealt with in the following section.

C. Some theoretical arguments against government intervention to influence territorial population distribution

Of the basic arguments against government intervention to influence territorial population distribution, those given below are levied mainly on theoretical grounds or in terms of the inconsistency of policy interventions:

(*a*) Restriction of freedom of the individual in mobility and in choice of residential and working locations;

(*b*) Disturbance of an automatic equilibrium mechanism which, on its own, will bring about convergence between the spatial distribution of population and economic opportunities;

(*c*) Ineffectiveness of such interventions due to the great complexity of factors involved. These arguments apply in varying degrees to the types of government intervention mentioned in section A.

Restriction of freedom of the individual

The argument concerning restriction of freedom of the individual is based on the assumption that migration and changes in the spatial distribution of population are (except for natural hazards) the freely made decisions of the individuals concerned. This assumption is made particularly for market economies. It furthermore accepts the neo-classical economic assumption of a population of unlimited potential mobility.

If one interprets migration and changes in the spatial distribution of population, however, as response (often involuntary) to external factors, these assumptions appear in a different light. A considerable part of migration, particularly from less developed areas, may in fact not be freely made by the individuals concerned, but may be their only way to survive. It is also increasingly doubtful whether the concentration of large numbers of population in a few huge metropolitan centres—both in developing and in industrialized countries—actually is the desire of the individuals concerned or rather the result of a lack of viable alternative.

The policy that is called "adaptive" intervention in the foregoing discussion actually is a cushioning of individuals, households and enterprises against such external factors. "Restricting normative" intervention is actually the type of intervention that attempts to counterbalance possible disruptive effects of such external factors and to re-establish the freedom of the individual not only to move but to retain his or her social, political, environmental and other preferences. It acknowledges the fact that individuals are not fully mobile and that wherever mobility has surpassed a certain threshold, social, political and environmental disruption has been the consequence, apart from the social cost to the individual.

As for other types of government intervention, such as "facilitating normative" intervention (e.g., for the development of a new national capital or the settlement of resource frontiers), they must be evaluated from the point of view of the freedom of the individual and will depend upon the degree to which incentive or compulsory measures are applied.

Such intervention, therefore, must be judged by the specific policy instrument employed, i.e., to what extent it enhances the choice of opportunities of the individual (household, enterprise etc.). The question becomes more complex, however, if one allows for the fact that even incentive measures often may only induce the individual to give in to such external pressures of the market mechanism as deteriorating terms of trade of specific regions.

Disturbance of an automatic equilibrium mechanism

There exists a vast literature on convergence but only a few relevant topics are discussed here. The basic assumption nurtured by neo-classical economists is that spatial differences in welfare will, given sufficient time, even out automatically through either of two major channels: (*a*) commodity flows and the ensuing equilibrium trend in the terms of trade; or (*b*) spatial flows of the factors of production and the ensuing spatial equilibrium in factor prices. Among the production factors is labour; therefore, some relevant theoretical hypotheses on migrational equilibrium are reviewed below in more detail.

For migratory movements or equilibrium-oriented trends in the labour market, there are a number of basic assumptions. A key assumption is that labour will migrate to highly developed regions with scarce labour supply (and therefore high wages) from areas of excess labour (and therefore low wage levels). Such assumed individual welfare-maximizing behaviour is expected to reduce labour supply in low-wage regions and increase it in high-wage areas, thereby equalizing wage levels between regions and making further migration unnecessary. At this stage of equilibrium at least temporary optimal allocation of labour would be reached in the sense that both individual welfare and overall efficiency would be maximized. Any government intervention (except for possible transitory measures) would distort this equilibrium mechanism and lead to a non-optimal allocation of labour.

The fact that, in reality, this equilibrium mechanism does not materialize in most countries has provoked a

great number of complementary explanations. Only the most crucial explanations are given here and are related to possible corrective measures which in many countries have been utilized in attempts to induce the equilibrium mechanism to operate.

Insufficient mobility of labour

Insufficient mobility of labour and other production factors were an explanation given for the malfunctioning of the equilibrium mechanism. Therefore, policies to increase the mobility of labour, capital and technology and to reduce barriers to their migration were implemented in many countries to improve the functioning of the equilibrium mechanism. Still, spatial disparities in levels of living have persisted and in many cases even further increased.[6] Migration propensities have also continued to increase, as have their disruptive social, political and environmental effects.

It has also been demonstrated theoretically that even with full transport integration a polynucleated settlement system will never reach spatial equality in welfare through individual optimizing behaviour.[7]

Qualitative selectivity of the migration process

Another explanation given is that the migratory processes between high-wage and low-wage regions have a negative selectivity bias against the latter in the sense that out-migration from less developed areas consists mainly of the more qualified and therefore more productive population strata. Thus, while labour supply in less developed areas decreases, productivity decreases even more and therefore average wages do not rise—as theoretically assumed—but decline even further. On the other hand, in highly developed areas labour productivity increases relatively; and, as a consequence, wage levels do not decline substantially. The relatively high productivity of in-migrants increases the productivity of capital and land there and thereby reduces the propensity of other factors to move into less developed areas. The system therefore continues moving away from equilibrium. A few countries, such as Canada, have attempted to reduce this negative selectivity of migration through incentives for the moving of entire families (including the aged and other dependent family members) but it appears that results have not been of great significance.

Unequal distribution of infrastructure, public services and scale economies

Another explanation for the malfunctioning of the equilibrium mechanism is the unequal spatial distribution of scale and external economies caused by infrastructure investment, public services and urban agglomerations. In many countries, therefore, an attempt has been made to reduce this bias by allocating more public investment to less developed areas. Because of the hierarchical characteristics of central-place facilities[8] and of sophisticated infrastructure systems, complete equality of accessibility to such facilities is both practically and theoretically impossible in a polynucleated settlement system. It has recently been shown,[9] however, that under conditions of differentiated scale economies even a perfect price system will lead to a suboptimal allocation of resources. Therefore, in contrast to a widely held view, both diminishing returns and increasing returns in the social production set can be "incompatible with the achievement of optimality via competitive prices (or any other parametric prices, for that matter)".[10]

Indefinite time lag in a possible interregional equilibrium

It has been shown[11] empirically that spatial disparities tend to follow an inverted U-curve in the process of national development, increasing in early stages of national development (initial industrialization); and, after passing a peak, declining again in later (post-industrial) phases of national development. This empirically noted phenomenon has been attributed speculatively to various factors, including changes in the composition of economic sectors (sequential emphasis on the primary, secondary, and tertiary sectors and their respective locational patterns) and varying degrees of spatial concentration of external and scale economies in different periods of national development.[12] Apart from the fact that this observed divergence-convergence sequence in the evolution of spatial disparities need not necessarily be reproduced in the future, its time dimension is indeterminate and may be intolerably long in rectifying inequities—from a social and political point of view—for most developing countries, which have the highest spatial disparities in levels of living and the greatest propensity towards migratory concentration.

Indefinite time lag in a possible interurban equilibrium

A similar inverted U-curve is postulated by El-Shakhs[13] to hold for urban primacy, i.e., the predomi-

[6] Ibid.

[7] William Alonso, "Income inequalities among regions in the long run—a theoretical note", paper submitted to the International Institute of Applied Systems Analysis, Laxenburg, Austria, 1978.

[8] Martin J. Beckman, "Chancenverteilung in einem zentral-örtlichen System" (Distribution of opportunities in a central place system), paper presented at the August-Lösch-Tage, Heidenheim, September 1978 (mimeographed).

[9] William J. Baumol, "Quasi optimality: the price we must pay for a price system", paper submitted to the Institute for Advanced Studies, Vienna, 1979. (Forthcoming in *Journal of Political Economy*.)

[10] Ibid., p. 3.

[11] J. G. Williamson, "Regional inequality and the process of national development: a description of the patterns", *Economic Development and Cultural Change*, vol. 13, No. 4, part II (July 1965), pp. 1–84.

[12] W. B. Stöhr, *Inter-urban Systems and Regional Economic Development*, Resource Paper Series, No. 26 (Washington, D.C., Association of American Geographers, 1974).

[13] Salah S. El-Shakhs, "Development, primacy and systems of cities", *Journal of Developing Areas*, vol. 7, No. 1 (October 1972), pp. 11–36.

nance of one or a few large cities over the rest of the urban system. He finds that urban primacy increased at early stages of national development and then began to decrease at later stages, approaching an equilibrium in which the population of each city (P_n) compared with the largest city in the country (P_1) would approach the inverse of its rank (R_n) in the urban hierarchy ($P_n = \frac{P_1}{R_n}$) and tend to follow a so-called "log-normal curve".[14] Such a log-normal city-size distribution presumably represents an optimal equilibrium allocation of central place facilities.[15]

The same uncertainties already mentioned in connection with a possible automatic interregional convergence apply in this case. In addition, the equilibrium rank-size rule for the urban system is non-spatial. That is, it considers only the relative size distribution of cities but not their geographical distribution over a territory, which means that even if the size distribution should correspond to the rank-size rule, all the larger cities may be located in only one region of a country, while the other regions may be deprived of larger and even intermediate-sized cities. It is clear that this situation would not facilitate migrational equilibrium, quite apart from the restrictions with respect to differential scale economies[16] discussed above.

It should be further stated that the foregoing arguments operate not only separately but in a cumulative way[17] which means that even if one or some of these disequilibrating factors did not exist or could be eliminated—thereby strengthening the arguments against government intervention in the equilibrium mechanism—the presence of even one of these factors would cumulatively cause the others to also work against equilibrium. Thus, differential access to external and scale economies will lead to a negatively selective migratory process, which will increase interregional disparities. Conversely, interregional disparities will reinforce interurban disparities, which will widen the differentiation in access to scale and external economies and thereby reinforce negative selectivity of the migratory process.

In fact, the only conditions under which automatic convergence towards equilibrium would occur—and thereby fully justify the theoretical arguments against government intervention—would be if either full mobility of population, production factors and commodities could be reached or if the total spatial system could be reduced to a point location[18] as neo-classical economists at first assumed. It happens that both these conditions are unfeasible and undesirable in practice. Both would be the cause of strong external diseconomies (full mobility because of the need for almost ubiquitous infrastructure, fully concentrated societies for their high agglomeration diseconomies), of strong social disruption (through excessive mobility or excessive density) and of environmental disruption (through lack of territorial identification or through the over-utilization of land and natural resources).

This, with given initial disparities in levels of living and only one disequilibrating factor present, large-scale functional integration and increased mobility of factors and/or commodities will inevitably lead to increasing disparities and require massive governmental intervention in territorial population distribution unless equity considerations are widely employed. Government intervention is necessary to compensate for the emerging spread and backwash effects[19] or polarization and trickling-down effects,[20] or to help population to redistribute so as to take account of them.

One condition in which government intervention to influence territorial population distribution would not be required would therefore be if its role were taken over by an economic policy that would effectively compensate for spread and backwash effects in order to reduce spatial disparities in welfare and thereby eliminate a major reason for migration and "spontaneous" redistribution of population. This question transcends the scope of the present paper and it is only indicated here that scarcely any successful policies to reduce major spatial disparities in welfare have thus far been developed for market and mixed economies.[21]

An alternative: a policy of selective spatial closure

A second condition under which no major government intervention to influence the territorial distribution of population would be necessary is one in which the emergence of these withdrawal effects is avoided by what has been called a policy of "selective spatial closure".[22] Such an alternative policy of "selective spatial closure", particularly for least developed peripheral areas,[23] would replace the current emphasis on large-scale functional integration and the unbalanced exploiting of territorially available resources[24] including migration. Such a policy would instead be

[14] Brian J. L. Berry and Frank E. Horton, eds., *Geographic Perspectives on Urban Systems: With Integrated Readings* (Englewood Cliffs, New Jersey, Prentice-Hall, 1970), p. 64.

[15] Martin J. Beckmann, *Location Theory* (New York, Random House, 1968).

[16] See W. J. Baumol, op. cit.

[17] As shown in Gunnar Myrdal, *Economic Theory and Underdeveloped Regions* (London, G. Duckworth and Co., 1957.

[18] Horst Siebert, *Regional Economic Growth: Theory and Policy* (Scranton, Pennsylvania, International Textbook Company, 1969).

[19] G. Myrdal, op. cit.

[20] Albert O. Hirschman, *The Strategy of Economic Development* (New Haven, Connecticut, Yale University Press, 1958).

[21] Walter B. Stöhr and F. Tödtling, "Evaluation of regional policies: experience in market and mixed economies", in Niles M. Hansen, ed., *Human Settlement Systems: International Perspectives on Structure, Change, and Public Policy* (Cambridge, Massachusetts, Ballinger, 1978).

[22] W. B. Stöhr and F. Tödtling, "Spatial equity—some antitheses to current regional development doctrine".

[23] Walter B. Stöhr, "Development from below: the bottom-up and periphery-inward development paradigm", in Walter B. Stöhr and D. R. F. Taylor, eds., *Development from Above or Below? A Critical Reappraisal of Spatial Planning in Developing Countries* (London, Wiley, forthcoming).

[24] Niles M. Hansen, "Development from above: the centre-down-and-outward development paradigm", in Walter B. Stöhr and D. R. F. Taylor, eds., op. cit.

geared towards the maximum mobilization and territorial integration of available natural, human and institutional resources for endogenously motivated and more self-reliant development.

As major changes in population distribution are triggered mainly by large-scale functional integration, such a policy of selective spatial closure would substantially reduce the need for government intervention. Territorially organized population groups would give priority to the collective self-reliance on territorially available resources for the satisfaction of their needs at local and successive regional, national and multinational levels. Therefore, territorially organized governance systems need to be reinforced and put to use as a counterbalancing power against the withdrawal effects of large-scale functional integration either by (multiregional) firms or by (multiregional) government. Such development "from below"[25] would be similar to the path followed by countries that were able to structure an articulated urban system and territorial governance mechanisms before large-scale functional integration at the national and international scale had taken place and were therefore much better able to retain such territorially organized structures in the face of large-scale functional integration. The more recently developing countries might need to retain or regain sufficient control over external influences to develop these territorially organized structures according to their own societal objectives.

D. Migration policy and government intervention to influence territorial population distribution in some European countries[26]

A striking illustration of the effects of insufficient economic redistribution policies and the practical lack of government intervention to influence territorial population distribution is the problems of both the less developed and the industrialized countries of Europe resulting from the (lacking) migration and distribution policy followed by the European members of the Organisation for Economic Co-operation and Development (OECD) during the past two decades.

The underlying philosophy was one of freedom of the individual and "liberalisation of manpower movement"[27] in order to permit the maximum possible growth for the members of OECD as a whole. Up to the end of the 1960s, the OECD report states, labour migration resulted from a coincidence of needs: excess labour demand in one group of the European countries combined with excess labour supply in the other group. The manpower agreements that were concluded were, at best, "adaptive" government intervention to ameliorate the consequences of overall OECD growth objectives for individual countries or population groups. The report states that the primary concern of the manpower agreements of the past was to supply manpower to the highly developed immigration countries. It further asserts that from the point of view of the labour-importing countries, the availability of migrant labour, like a "reserve army of unemployed", exerts a downward pressure on wages and prices, which allows a surplus from lower cost output. Labour migration in post-war Europe has been determined strictly from the demand side: the supply of labour was well in excess of demand in the receiving countries; therefore, wages remained relatively low in those countries, even though output was expanding rapidly. Thus, the report concludes, the proceeds from increased output were channelled into profits or into returns to capital, which ensured the "positive feedback" needed for the continuation of the process.

From the standpoint of the less developed countries that "export" migrants, the remittances of their migrants working abroad provide foreign exchange to finance capital importation and thus economic development. "Human capital is thus exported with the hope that it will finance the importation of physical capital at a later date."[28] The OECD report further states that this hope is, of course, a longer term consideration.

The report takes note that the analytical work of OECD historically appears to have been more concerned with growth and price stability in the highly developed countries of the area than with the development problems of the developing economies, possibly on the "assumption that high rates of economic growth among the more advanced countries would ultimately 'trickle down' to the less advanced countries".[29]

In the early 1970s, however, before the longer term consideration could materialize and lead to the automatic convergence of welfare levels predicted by neoclassical economists, the labour markets began to deteriorate; and around 1973, the industrialized European countries unilaterally decided to restrict the further inflow of foreign labour. The OECD report gives two ostensible reasons for the imposition of the restrictions: (*a*) the decline of economic benefits from continued importation of foreign labour due to lagging world demand for output; and (*b*) the perceived rising social costs of accommodating and integrating increasing proportions of foreigners during a period of growing relative scarcity. Furthermore, social tensions were occasionally manifested, particularly in urban areas containing large concentrations of foreigners who, according to the report, had begun to acquire tastes more like those of the nationals of the country and who claimed a larger share of such public services as schools, medical services and housing.

It was then recognized that migration consists of

[25] W. B. Stöhr, "Development from below: the bottom-up and periphery-inward development paragigm".

[26] This section draws extensively on Organisation for Economic Co-operation and Development, *Migration, Growth and Development* (Paris, 1979).

[27] Ibid., p. 9.

[28] Ibid., p. 28.

[29] Ibid., p. 44.

more than the movement of factors of production. As the OECD report points out, migration is the movement of people; as such, it has an essential social component. The process gives rise to social costs for the populations of both the sending and receiving countries, costs borne not only by the migrants and their employers. Migration implies a mixing of cultures, which can on occasion lead to serious social tensions. Furthermore, the increasing demands on public goods and services reduce the net economic benefits accruing to the host country. "Social tensions can completely reverse net economic profits and turn them into net social losses."[30]

These human and social problems have, of course, existed throughout the period of rapidly increasing migration and of large-scale redistribution of labour and population; but they were masked by the general growth euphoria and by a concomitant neglect of the anxieties of the persons facilitating that growth. More systematic and deliberate reactions occurred only when overall growth slackened and the structural weaknesses created by growth became visible.

In order to cope with these problems, the OECD report suggests that from an international standpoint, the most pressing priority is to have a policy whereby assistance would be given to the less developed countries, so as to redistribute their current unemployment burden—caused by the return of their nationals who had been working abroad—more equitably. The report takes note that although migration was at first found to be a useful factor in post-war European growth, it is now recognized merely to manifest unequal international development; such unrestricted migration "is not and should not be considered a key" to the long-term development problems of the countries sending migrants. Concerning migration, the report continues that "as a causal factor in the relief of employment problems it is but marginal in the longer term".[31]

A number of options are recommended by the OECD report for the equitable redistribution of the burdens created by restrictions on labour flows:

(*a*) Tax/transfer schemes in favour of less developed countries;

(*b*) Compensation by investment;

(*c*) Loans or grants to stimulate the growth of labour-intensive activities in the less developed regions covered by OECD;

(*d*) Institution of "migratory chains" intended to utilize the various emigration phases—from the worker's departure and during his stay in the host country until his return and reintegration into the socio-economic life of his own country—for the "optimum benefit of the country of emigration and the worker himself".[32]

With respect to the migratory chain, the report acknowledges, more realistically, that although its advantages are evident, its implementation would be difficult. Furthermore, when effectively implemented, although such a chain might accelerate development by fostering a greater flow of remittances and helping to increase employment, thereby speeding the return of migrant workers, it would be "an extension of emigration rather than an alternative to it".[33]

It is clear that many of the problems mentioned could have been avoided had such measures in favour of the less developed regions been taken before large-scale migration and population redistribution advanced to the current stage. The measures for government intervention to influence territorial population distribution suggested here can only attempt to salvage whatever is possible.

The OECD report on the situation in Europe has been drawn on extensively not because it can be of direct use in other major areas of the world, in particular the less developed regions. Rather, the contention is that this information can help other regions that have not yet reached such a high degree of large-scale functional integration to avoid similar pitfalls, either by searching for more effective policies to reduce spatial inequalities of levels of living as the major cause of "spontaneous" large-scale population redistribution or by examining more closely the consequences of a policy of "selective spatial closure", as suggested elsewhere.[34]

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[30] Ibid., p. 30.
[31] Ibid., p. 36.
[32] *Ibid.*, p. 40.
[33] *Ibid.*, p. 40.
[34] W. Stöhr and F. Tödtling, "Spatial equity—some antitheses to current regional development doctrine".

Part Three

POPULATION REDISTRIBUTION MECHANISMS AND POLICY INSTRUMENTS

V. POPULATION REDISTRIBUTION MECHANISMS AS RELATED TO VARIOUS FORMS OF DEVELOPMENT

*Raúl Urzúa**

The rapid transformation of developing countries into urban societies is a common theme wherever the process of social and economic change is discussed. Although some of these countries are already predominantly urban, others will not reach that stage before the turn of the century; in any case, the overwhelming majority of them are experiencing annual rates of urban growth between 4 and 6 per cent. Even by the end of the twentieth century the average rate of urban growth for all less developed regions is projected to be 3.8, while that of the more developed countries will be only 1.2 per cent.[1] At the same time, many less developed countries, particularly in Asia and Latin America, are characterized by an increasing trend towards urban concentration and city primacy, with the largest city often being three times larger than the following three.[2] Therefore, it is not surprising that urban concentration and metropolitanization and the need to curb those trends and to deal with the social problems attributed to them are among the most urgent topics of discussion at government meetings concerned with population policies.[3]

Government interest in the subject and in the choice of alternative policies raises a number of questions to which the answers are full of policy implications. The first question is whether the concern over, and the deliberate attempts to alter, trends in population distribution are in fact justified. If the answer to this first question is affirmative and one accepts that any national policy directed towards modifying the territorial distribution of population will try to do so by intervening in the migratory process, the issues of the characteristics of the process and the factors which determine it raise a second question to be clarified. A third, more directly policy-oriented question is whether the factors identified as determining the process of migration, in particular migration to large cities, have been or can be subject to policy interventions and what the viability of alternative policies might be.

Possible answers to the first of these three questions are discussed by other participants in this workshop. In this paper some issues related to the last two questions are examined. After identifying the main types of internal migration, the state of knowledge regarding the determinants of migration is assessed. That knowledge, and an identification of the main gaps in it, are then used to present the major guide-lines of an approach to link more systematically demographic trends in general, and patterns of population distribution in particular, with different styles of development.[4]

A. TYPES OF INTERNAL MIGRATION AND THE MIGRATORY PROCESS

Rural-urban migration is perhaps the most important and certainly the most frequently mentioned of the population movements contributing to urbanization but is certainly not the only movement. An understanding of the processes involved and deliberate interventions directed towards altering those trends and patterns requires that other types of movements—rural-rural, urban-urban and return migration—and their timing patterns also be taken into account. When the perceived problem is the rapid growth of the largest cities, urban-urban movements acquire special importance.

* United Nations Latin American Demographic Centre (CELADE), Santiago, Chile.

[1] *Patterns of Urban and Rural Population Growth* (United Nations publication, Sales No. E.79.XIII.9), p. 13, table 5.

[2] Riad B. Tabbarah, Muhi A. Mamish and Youssef Gemayel, "Population research and research gaps in Arab countries", background paper IRG-WI/B.P.5 prepared for the First Workshop on Research Priorities for Population Policy, organized by the International Review Group of Social Science Research on Population and Development, and co-sponsored by Marga Institute, Sri Lanka Centre for Population Studies; Colombo, 26–28 April 1978; Fernando Gatica, "Panorama de la urbanización Latinoamericana, 1950–1970", Santiago, Chile, Centro Latinoamericano de Demografía, n.d. (unpublished manuscript); Ernesto M. Pernia, "Urban transition in Southern and East Asia", paper presented at the Seventh Seminar on Population, East-West Population Institute, Honolulu, Hawaii, June 1976; and United Nations, op. cit.

[3] P. B. Desai, "Whither population research in South Middle Asia"; Akin L. Mabogunje and O. Arowolo, "Review of the literature on the population-development relation in Africa south of the Sahara"; Gavin W. Jones, "Social science research on population and development in East and South-East Asia"; a review and a search for directions"; Raúl Urzúa, "Social science research relevant for population policies in Latin America", background papers IRG-WI/B.P.1, IRG-WI/B.P.4, IRG-WI/B.P.3 and IRG-WI/B.P.6, respectively, prepared for the First Workshop on Research Priorities for Population Policy, organized by the International Review Group of Social Science Research on Population and Development, and co-sponsored by Marga Institute, Sri Lanka Centre for Population Studies; Colombo, 26–28 April 1978; and R. Tabbarah, M. Mamish and Y. Gemayel, op. cit.

[4] The ideas presented in this paper are strongly influenced by current theoretical and empirical research efforts of the Population and Development Programme of the United Nations Latin American Demographic Centre (CELADE), as well as by discussions of the International Review Group of Social Science Research on Population and Development (IRG). However, as usual, the author accepts sole responsibility for any shortcomings and oversights which may exist in the present paper.

Unfortunately, knowledge about the particular types of migratory movements is generally inadequate. In developing countries, lack of data is most clearly responsible for this inadequacy. As detailed elsewhere in this volume, and as a recent review of the subject recognizes, specific questions on migration have only recently begun to be included in censuses and just a few specialized surveys on migration have been conducted. Many of the migration estimates currently available for developing countries are "derived from the application of indirect techniques to the intercensal volume of population change. Such estimates refer only to net migration and provide no indication of the size of the opposing flows of in- and out-migration to or from the region or city in question."[5]

Because of data limitations and despite the interest that Governments are beginning to show, little is known of the volume and composition of temporary movements, of their consequences both for the populations involved and for the places of origin and destinations or of their role in the entire migratory process. Nevertheless, their historical importance in Africa is well known to students of that region.[6] The land-tenure system that has historically prevailed in Latin America has also made for the continued existence of seasonal migrations in that region. More recently, the trend for commercial agricultural firms to prefer seasonal rather than permanent workers has led this type of migration to become even more important than in the past.[7] At the same time, circular movements, that is, migration back and forth between urban and rural places, have been found to be especially important in Thailand,[8] Brazil and other places; but except for the rich information obtained in the longitudinal survey of social, economic and demographic changes conducted by the Institute of Population Studies at Chulalongkorn University (Bangkok), very little is known of the factors determining such circular movements, or of their composition and impact in places of origin and of destination.

Permanent rural-rural migration is a second little known type of population movement. It has been particularly prevalent in countries where the agricultural frontier has not yet been exhausted and occurs either as a spontaneous reaction to high population densities and land shortages in certain areas, as, for example, in Bolivia and Brazil in South America, and in Mexico and other countries of Middle America;[9] or as part of Government-sponsored colonization programmes, as in the Indonesian transmigration programme, in the Philippines, in the United Republic of Tanzania or in Brazil.[10] In Western Africa, such migration usually involves movements from rural areas in the interior towards rural areas nearer the coast.

Although there is no doubt that rural out-migration is massive in most developing countries, its exact magnitude can only be estimated because the population censuses do not provide information allowing for its direct measurement. Indirect estimates suggest that the rural areas of Latin America were able to retain 63 per cent of their natural population growth in the intercensal period 1940–1950, but only 51 per cent of it in the intercensal period 1950–1960 and even less (only 42.1 per cent) during 1960–1970.[11]

Recently, the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat has developed a set of internationally comparable net rates of rural-urban migration and has estimated the percentage it represents of the rural natural increase for 29 developing countries and 20 developed countries.[12] According to these estimates, rural out-migration, on average, is about one half the value of the rural natural increase in developing countries. The higher percentages are found in Latin America, although in this major area, as in others, wide intraregional disparities are found (see table 2).

The relative importance of rural-urban vis-à-vis urban-urban movements in urban concentration and metropolitanization appears to vary from region to region, and even from country to country. All the

[5] *Population Policy: Research Priorities in the Developing World*, Report of the International Review Group of Social Science Research on Population and Development, prepared by Carmen A. Miró and Joseph E. Potter (London, Frances Pinter (Publishers) Limited, 1980), p. 119.

[6] See Derek Byerlee, "Rural-urban migration in Africa: theory, policy and research implications", *International Migration Review*, vol. 8, No. 4 (Winter 1974), pp. 543–566; M. E. Harvey, "Interregional migration studies in tropical Africa", in Leszek A. Kosiński and R. Mansell Prothero, *People on the Move: Studies in Internal Migration* (London, Methuen and Co., Ltd., 1975), pp. 151–163; and Samir Amin, ed., *Modern Migrations in Western Africa*, International African Institute Series (London, Oxford University Press, 1974), introduction.

[7] R. Urzúa, op. cit.

[8] Sidney Goldstein, Pichit Pitaketpsombati and Alice Goldstein, "Migration and urban growth in Thailand: an exploration of interrelations among origin, recency and frequency of moves", in Anthony H. Richmond and Daniel Kubat, *Internal Migration: The New World and the Third World*, Studies in International Sociology, No. 4 (Beverly Hills, California, Sage Publications, 1976), pp. 116–147.

[9] R. Urzúa, op. cit., p. 132.

[10] For Indonesia, William S. Johnson, Ahmad Sanusi and Joseph B. Tamney, "Transmigration potential in Indonesia", in Smithsonian Institution, *The Dynamics of Migration, Internal Migration and Migration and Fertility*, Interdisciplinary Communications Program Occasional Monograph Series, No. 5, vol. I (Washington, D.C. 1976), pp. 41–76; for the Philippines, Paul D. Simkins and K. Wernstedt, *Philippine Migration: The Settlement of the Digot-Pababa Valley, Davao Province*, South-East Asia Studies Monograph Series, No. 16 (New Haven, Connecticut, Yale University Press, 1971); for the United Republic of Tanzania, Frederik Claeson and Bertil Egero, "Interregional migration in Tanzania", in Pierre Cantrelle, ed., *Population in African Development* (Dolhain, Belgium, Ordina Editions, 1974), vol. I, pp. 107–118; and for Brazil, Centro Brasileiro de Análise e Planejamento. "Amazonia: desenvolvimento socio-economico e politicas de populaçao" (manuscript).

[11] For the periods 1940–1950 and 1950–1960, Louis Ducoff, "The role of migration in the demographic development of Latin America", *The Milbank Memorial Fund Quarterly*, vol. XLIX, No. 4, part 2 (October 1965), pp. 197–216; for the period 1960–1970, F. Gatica, op. cit.

[12] *Patterns of Urban and Rural Development;* see also Samuel H. Preston, "International comparison of net rural-urban migration rates", in International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980s, Helsinki, 1978; Solicited Papers* (Liège, n.d.).

TABLE 2. SOURCES OF INTERCENSAL GROWTH OF RURAL POPULATION IN DEVELOPING COUNTRIES

Major area or region and country	*Intercensal period*	*Annual intercensal population growth rate of rural areas (1)*	*Estimated annual rural rate of natural increase (2)*	*Estimated annual rate of rural population loss from migration and reclassification (3)*	*Rural out-migration and reclassification as a percentage of natural increase* $(4)=\frac{3}{2}\times 100$
Africa					
Ghana	1960–1970	0.01631	0.02340	0.00710	30.3
Morocco	1960–1971	0.01603	0.02436	0.00832	34.2
Latin America					
Argentina	1947–1960	−0.00901	0.02353	0.03254	138.3
Brazil	1950–1960	0.01269	0.03211	0.01942	60.5
	1960–1970	0.00862	0.03131	0.02269	72.5
Chile	1952–1960	−0.00035	0.02655	0.02690	101.3
	1960–1970	−0.01157	0.01721	0.02878	167.2
Colombia	1951–1964	0.01609	0.03383	0.01773	52.4
Dominican Republic	1950–1960	0.02667	0.03655	0.00988	27.0
	1960–1970	0.01350	0.02901	0.01552	53.5
Ecuador	1950–1962	0.01884	0.02765	0.00881	31.9
El Salvador	1950–1961	0.02471	0.02928	0.00457	15.6
	1961–1971	0.03245	0.03765	0.00520	13.8
Guatemala	1964–1973	0.01853	0.02408	0.00555	23.0
Mexico	1960–1970	0.01543	0.03471	0.01928	55.5
Nicaragua	1950–1963	0.02155	0.02930	0.00775	26.5
Panama	1950–1960	0.03000	0.03908	0.00908	23.2
	1960–1970	0.01845	0.03245	0.01400	43.1
Paraguay	1962–1972	0.02348	0.02984	0.00636	21.3
Peru	1961–1972	0.00453	0.02896	0.02443	84.4
Puerto Rico	1960–1970	−0.01438	0.01423	0.02860	201.0
Uruguay	1963–1975	0.00313	0.00567	0.00254	44.8
Venezuela	1950–1961	0.00518	0.04190	0.03672	87.6
	1961–1971	−0.00020	0.03452	0.03473	100.6
Asia					
Bangladesh	1961–1974	0.02310	0.02597	0.00288	11.1
India	1951–1961	0.01854	0.02047	0.00193	9.4
	1961–1971	0.01971	0.02215	0.00244	11.0
Indonesia	1961–1971	0.01786	0.02046	0.00260	12.7
Iran	1956–1966	0.01617	0.02819	0.01201	42.6
Iraq	1957–1965	−0.00101	0.02528	0.02629	104.0
Republic of Korea	1960–1970	0.00293	0.02357	0.02065	87.6
Nepal	1961–1971	0.02037	0.02085	0.00048	2.3
Sri Lanka	1953–1963	0.02097	0.02600	0.00503	19.3
	1963–1971	0.01758	0.02309	0.00551	23.9
Syrian Arab Republic	1960–1970	0.02130	0.03186	0.01055	33.1
Turkey	1955–1960	0.01845	0.03029	0.01184	39.1
	1960–1970	0.01142	0.02730	0.01589	58.2

Source: Summarized from *Patterns of Urban and Rural Population Growth* (United Nations publication, Sales No. E.79.XIII.9), p. 28, table 12.

available information indicates that persons migrating directly from rural areas to capital cities in Latin America constitute only a small fraction of total migrants to those cities, while the highest proportion is composed of people who come from other urban centres.[13] Unlike the situation in Latin America, rural-urban migration appears to be mainly responsible for the growth of cities in Africa south of the Sahara.[14] In the Philippines, direct rural-urban migration has had a greater impact upon the growth of Manila than of other urban places.[15] Lastly, in Thailand, direct migration to Bangkok seems to be more common among women than among men, although urban-urban migration has become more important in recent years.[16]

The pattern found in Thailand can very well be generalized. No doubt increasing urbanization will make urban-urban migration a significant phenomenon in all

[13] R. Urzúa, op. cit.

[14] A. L. Mabogunje and O. Arowolo, op. cit.; and John C. Caldwell, *African Rural-Urban Migrations: The Movement to Ghana's Towns* (Canberra, Australian National University Press; New York, Columbia University Press, 1969).

[15] Ernesto M. Pernia, "Urbanization in the Philippines: implications for population distribution policy", in Smithsonian Institution, *The Dynamics of Migration: Internal Migration and Migration and Fertility*, Interdisciplinary Communications Program Occasional Monograph Series, No. 5, vol. I (Washington, D.C., 1976), pp. 77–132.

[16] Sidney Goldstein and Penporn Tirasawat, *The Fertility of Migrants to Urban Places in Thailand*, Papers of the East-West Population Institute, No. 43 (Honolulu, Hawaii, East-West Center, 1977).

countries. Among the currently most urbanized developing countries it is probably already the most important type of movement. At the same time, by definition, increases in the percentage of the total national population which lives in urban areas are due to rural out-migration (whatever the urban destination might be) as well as to urban natural growth and reclassification of previously rural settlements as urban. In any case, as long as urbanization continues, rural out-migration will remain an important subject of inquiry for those who attempt to reduce its pace.

Return migration is a fifth type of spatial population movement which cannot be neglected in an analysis of the processes affecting population distribution in less developed countries. Its importance in Africa and its links with cultural traditions have been well described.[17] Its possible links with the communal land-tenure system found in many rural areas of Africa, but almost non-existent in Asia and Latin America, have also been pointed out.[18] Nevertheless, there are indications that return migration may also be significant in those two major areas.[19] Unfortunately, problems involved in obtaining the information from census data and the neglect of the phenomenon in most survey studies on migration make it impossible to estimate how many and which migrants return to their communities of origin.

Lack of data has also made it virtually impossible to grasp the migratory process as a whole and the mutual interrelations among the different types of spatial movements. In most cases, analyses and interpretations of the process limit themselves to the links between rural-urban and urban-urban migration within the framework of the stepwise migration model, but even within this restricted view the studies are few and the conclusions unclear.

It seems plausible to expect changes in the relative importance of one or another type of migration as a consequence of changes in the relative importance of rural and urban areas, as well as of socio-economic, cultural and demographic processes. Unfortunately, this problem has been very little studied. From the scant references found in the literature it appears that circular movements have lost importance in relation to permanent rural-urban migration in Africa,[20] while in Latin America, seasonal rural-rural movements seem to have become more important than permanent rural-rural migration.[21]

Lack of clarity with respect to the migratory process as a whole makes it difficult to understand fully all the consequences of internal migration or to relate its different types to structural changes and socio-economic processes taking place in the country as a whole, in rural and urban areas and in specific regions. Thus, any attempt to examine the mechanisms affecting changes in population distribution due to internal migration at different levels or with different forms of development must remain speculative at this moment. A review of the state of knowledge concerning the determinants of internal migration, and its adequacy for clarifying the interrelations between them and development forms, is a necessary first step in that direction.

B. Determinants of internal migration

Studies on migration determinants are usually one of two main types: descriptions of the motives for migrating given by individual migrants; or econometric studies including such economic, social or cultural factors as income levels, unemployment rates and educational levels. A third, less common type of study includes attempts to link more general development trends with migration flows. Although both for theoretical and for practical purposes it would be better to identify the specific factors affecting each type of migratory movement, most of the findings available refer either to migration between administrative units or to rural-urban movements.

Socio-psychological factors as migration determinants

It is possible analytically to distinguish between the process of deciding to migrate or not to migrate, when to do it, where to go, with whom and for how long, and the motivations leading to the making of such decisions. However, the actual decision-making process has rarely been studied. Lacking direct data, most studies make the assumption that such a process is economically rational and that people decide to migrate when the perceived costs of staying at their current place of residence are higher than the benefits of changing residence, minus transportation costs.[22]

In addition, numerous studies exist on the motives for migrating given by individual respondents to survey questions. Although the order of importance of the

[17] J. C. Caldwell, op. cit.; and S. H. Ominde, "Some aspects of population in Kenya", in John C. Caldwell and Chukuka Okonjo, eds., *The Population of Tropical Africa* (London, Longmans, 1968), pp. 264–269.

[18] D. Byerlee, loc. cit.

[19] S. Goldstein and P. Tirasawat, op. cit.; Waltraut Feindt and Harley L. Browning, "Return migration: its significance in an industrial metropolis and in an agricultural town in Mexico", *International Migration Review*, vol. 6, No. 2 (Summer 1972), pp. 158–165; and Peter S. K. Chi and Mark V. Bogan, "Estudio sobre migrantes y migrantes de retorno en el Perú", *Notas de Población* (Centro Latinoamericano de Demografía), Año III, vol. 9 (December 1975), pp. 95–114.

[20] D. Byerlee, loc. cit.

[21] Claude Bataillon and Ivon Lebet, "Migración interna y empleo agrícola temporal en Guatemala", *Estudios Sociales Centroamericanos*, Año V, No. 13 (January-April 1976), pp. 35–67, and Economic Commission for Latin America, *Las Transformaciones Rurales en América Latina: Desarrollo Social o Marginación?* (Santiago, Chile, Centro Latinoamericano de Demografía, 1979).

[22] The classical formation of this model in found in the often-quoted paper by Larry A. Sjaastadt: "The costs and returns of human migration", *Journal of Political Economy*, vol. 70, No. 5, part 2 (October 1962), pp. 80–93. The same assumptions are made in the well-known Todaro model and in successive modifications of it. Michael P. Todaro, "A model of labor migration and urban unemployment in less developed countries", *American Economic Review*, vol. 59, No. 1 (March 1969), pp. 138–148.

reasons is not necessarily the same, they fall basically into four main categories: (*a*) low income at the place of origin and expectations of increasing it at the place of destination; (*b*) unemployment, underemployment or job dissatisfaction at place of origin and expectation of better employment opportunities at place of destination; (*c*) search for better educational opportunities than those available at place of origin; and (*d*) a variety of other reasons, such as marriage, death of a family member or the presence of friends and relatives at the prospective new place of residence.

Economic, social and cultural determinants

Most of the information available on economic, social and cultural determinants comes from cross-sectional econometric studies based on census data of migration between administrative units, although in a few cases rural-urban migration has been examined. The most recent reviews and evaluations[23] of the findings from this type of study confirm the importance of differences in average income or wage levels and in employment opportunities, which previous reviews had already found. Migration is positively associated with urban wages and negatively associated with rural wages. It is also positively associated with the size of urban/rural differentials. At the same time, the chances of obtaining employment (which are inversely related to the urban unemployment rate) are independently significant, but the distinction between opportunities in the modern or formal sector or in the traditional or informal sector does not appear to be of much importance.[24]

Other variables usually included in econometric studies are the degree of urbanization, urban contacts, distance and education. With respect to the first variable, evidence suggests that urban areas exert an attraction above and beyond that of economic opportunities, a finding that is usually interpreted as indicating the independent effect of other features of urban life, such as better living conditions and more amenities.[25]

Previous urban contacts (as measured by the presence of friends and relatives) are also positively related to urban in-migration, although they do not seem to be a substitute for economic incentives. On the other hand, distance has a strong negative effect.

Lastly, although the search for wider educational opportunities is one of the main reasons given for out-migration, the relationship between local educational levels at places of origin and of destination with migration is not easy to determine and empirical studies have come to inconclusive results, basically because increases in educational levels also increase educational and occupational aspirations. Findings from Africa and from Latin America confirm this ambiguous relationship.[26]

Development trends and migration determinants

Although wage differentials, the probability of finding a job and other variables mentioned above are the immediate factors determining migration, these factors depend upon, among other things, the spatial allocation of economic activities and the patterns of regional and sectoral development. Studies of the specific aspects of development that are influencing internal migration in general, and rural-urban migration in particular, are therefore of the utmost theoretical and practical importance. Unfortunately, empirical knowledge of such structural factors affecting national volumes of internal migration is rather thin at this moment. However, field studies in some rural areas allow a number of tentative generalizations as to the impact on rural out-migrations of changes in the land-tenure system and in agricultural productivity, derived from more general development trends or from agrarian reform programmes and other types of agricultural policies.

The subject has received particular attention in Latin America. In general, studies confirm that agricultural modernization has deeply affected land and labour relations, has decreased rural occupational opportunities and increased rural income inequalities; and, as a final outcome, is directly related to rural out-migration.[27]

Analogous findings have been mentioned as influencing the determinants of migration in Asia, particularly with respect to the effects of the "green revolution". According to one report,[28] agricultural innovations in India have favoured the land-owners and mechanization has forced landless labourers to emigrate, while tenant farmers have seen their leases terminated by the owners once they begin to produce a profit. A conclusion along the same lines has been reached in a study[29] of the changes in the area of

[23] Lorene Y. L. Yap, "Internal migration and economic development in Brazil", *Quarterly Journal of Economics*, vol. 90, No. 1 (February 1976), pp. 119–137; Sally Evans Findley, *Planning for Internal Migration: A Summary of the Issues and Policies* (Washington, D.C., Center for Advanced Studies, 1976); Alan Simmons, Sergio Diaz-Briquets and Aprodicio A. Laquian, *Social Change and Internal Migration: A Review of Research Findings from Africa, Asia and Latin America* (Ottawa, Canada, International Development Research Centre, 1977); Michael P. Todaro, *Internal Migration in Developing Countries: A Review of Theory, Evidence, Methodology and Research Priorities* (Geneva, International Labour Office, 1976); R. Paul Shaw, *Migration Theory and Fact*, Bibliography, Series No. 5 (Philadelphia, Pennsylvania, Regional Science Research Institute, 1975); and R. Urzúa, op. cit.

[24] L. Y. L. Yap, loc. cit.

[25] Ibid.

[26] For review of findings from Africa, A. Simmons, S. Diaz-Briquets and A. A. Laquian, op. cit.; for Latin America, R. Urzúa, op. cit.

[27] R. Urzúa, op. cit.

[28] P. Visaria, "The adoption of innovations in agriculture and population trends in India", paper presented at the Seminar on the Effects of Agricultural Innovation in Asia on Population Trends, Manila, Ramon Magsaysay Foundation, 6–9 February 1972.

[29] H. K. Manmohan Singh, "Population pressure and labour absorbability in agriculture and related activities", in International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980s, Helsinki, 1978; Solicited Papers* (Liège, n.d.).

northern India associated with the green revolution. Nevertheless, an analysis[30] of data from studies in Java (Indonesia), the Philippines and Thailand led to the conclusion that little direct evidence exists to suggest that agricultural innovations have had a direct influence on migration.

In line with this conclusion, another study[31] finds that unemployment results when the farm production techniques cannot accommodate all workers and when there are no alternative sources of non-agricultural employment. Studies in Mexico, Puerto Rico and Thailand[32] provide empirical support for the conclusion that lack of non-agricultural employment in the rural areas is positively related to rural out-migration. It can be reasonably expected that seasonal labour force migration will also be heavily influenced by the availability of such types of employment in the rural villages. It would therefore be interesting to determine if any discernible trends exist in the relative importance of agricultural and non-agricultural occupations in rural areas at different levels of development and in different regions of the world.

A recent United Nations report[33] includes comparative analyses of occupational structures within urban and rural areas. A three-way occupational classification of workers by agriculture, industry and services, according to what the workers actually do in the production process, was used to examine the labour force structures of urban and rural areas in relation to five development levels, as measured by the percentage of total labour force in agriculture. The main finding is that as development proceeds the relative importance of agricultural occupations in rural areas is reduced to about one third of its initial level (from 87 per cent to 27 per cent). Such changes are due to an increase of both manufacturing and services. The former sector expands from about 5 per cent of the rural labour force at the lowest level of development to 38 per cent at the highest level. The latter begins at about the same level as manufacturing to end by representing almost a third of the rural labour force. Such structural changes are far more pronounced than those occurring in urban areas as development proceeds, contrary to what is usually believed. The end-result is a convergence of the rural labour force structure to the relatively stable urban structure.

Time-series analyses for 16 countries at different development levels included in the same United Nations study[34] confirm the findings from the cross-sectional analysis: excluding only Sweden in the period 1960–1970 and Peru in 1961–1972, all countries included in the study show a decrease in the relative importance of agriculture in rural areas. Furthermore, the percentage of both industry and services rose in a majority of the rural areas of less developed countries.

A comparison of countries in different regions, with the percentage of the labour force in agriculture controlled, shows that rural regions in Latin America are much more highly specialized in agricultural occupations than they are in Africa and Asia. In Latin America, non-agricultural activities are mostly urban while the rural areas are almost exclusively agricultural enclaves.

Trends in the spatial division of labour affect rural out-migration and seasonal labour movements, inasmuch as they influence the number and types of occupational opportunities available in the rural and urban areas. Although in the long run a decrease in the percentage of the labour force in agriculture tends to produce more diversified structures of occupational opportunities in the rural areas, the introduction of capital-intensive agricultural technologies in countries at a low development level is positively related to rural out-migration due to the reduction of occupational opportunities in agriculture and to the lack of alternative occupational opportunities in rural areas typical of such a level of development. The situation appears to be particularly acute in Latin America, where a combination of low population densities in rural areas and a land-tenure system based on large landholdings and a colonial type of labour force has led historically to widely dispersed rural settlements. It must be added that Latin America demonstrates perhaps the clearest case of over-urbanization—that is, urbanization that preceded industrialization, in contrast to what currently developed countries experienced in the past and what other contemporary less developed countries are experiencing now.

At this point, it is appropriate to raise the issue of the impact of the main trends in regional and sectoral development in less developed countries on the more direct determinants of migration. The question of course is not whether inequalities in regional and sectoral development are related to rural/urban, interregional and intersectoral differences in income, employment opportunities etc., but how wide those differences are and what the major trends in the allocation of economic activities appear to be. A review of the literature on this subject reveals that although in some cases economists and regional planners are aware of the implications of such trends for internal migration, they usually consider them to be part of the jurisdiction of demographers and population experts. Since these, in turn, rarely dare to go beyond the most direct migration determinants, discussions on the subject at this moment cannot but be speculative and somewhat impressionistic.

Most speculations as to the links between processes of population redistribution and major trends in regional and sectoral development, as well as a larger

[30] A. Simmons, S. Diaz-Briquets and A. A. Laquian, op. cit.

[31] S. E. Findley, op. cit., p. 12.

[32] For Mexico, ibid.; for Puerto Rico, Thomas V. Boswell, *Municipio Characteristics as Factors Affecting Internal Migration in Puerto Rico* (Gainesville, Florida, University of Florida, Department of Geography, n.d.); for Thailand, H. Leedom Lefferts, Jr., "Migration in Isan: information diffusion and structure response in northeast Thailand", paper presented at the Thirty-second Annual Meeting of the Society for Applied Anthropology, 12–14 April 1973.

[33] *Patterns of Urban and Rural Population Growth*, p. 69, table 26.

[34] Ibid., p. 75, table 29.

number of efforts to support those speculations with empirical data, are found in Latin America. Students of the subject tend to agree that this major area has been experiencing a trend towards an ever-growing concentration of industrial development in one or at most a few pre-existing large cities, while the rest of the country remains largely non-industrialized. These few industrial centres continue to diversify their social and economic structure, while, on the contrary, all the other internal regions remain undiversified, their economies being mostly based on the exploitation of raw materials and, at the most, some primary processing.

This type of internal division of labour creates a kind of asymmetrical relationship between the few industrial centres and the rest of the country, closely resembling those existing between more developed and less developed countries, thus making it possible to speak of "centre/periphery" relations or of "internal colonialism".[35]

According to the same sources, once this type of relationship is established employment opportunities tend to grow more rapidly, wages and salaries tend to be higher, the social structure is more open for upward mobility, educational opportunities are higher and, in general, all migration determinants have more positive values at the centre than at the periphery. This inequality of opportunities originated by centre/periphery, urban/rural and interregional development would be the most general explanatory factor for the Latin American pattern of massive movements to a few urban centres. Industrial concentration, primate urban systems, urban concentration and unequal population distribution then become inextricably interwoven and mutually reinforcing processes.

Arguments closely resembling those made in Latin America have been presented by experts on Africa with reference to the impact of more general development trends on the patterns of population redistribution. As previously stated, the two most important types of migration in those countries are rural-rural movements of either a temporary or a permanent character from the interior to the coast and movements from rural areas to urban coastal towns. These migration flows are in fact, as has been shown,[36] movements from the internal peripheries to the national centres of capitalistic development. The same authors argue that such movements further increase the regional imbalances inherited from the colonial past. Population movements in Western Africa are then the response of the labour force to a pattern of development more attuned to the interests of foreign capital than to those of the countries of Africa.

Similar arguments have been raised with respect to the countries of Asia[37] and to developing countries in general.[38] The most general conclusion of all such studies is that the patterns of population distribution prevalent in the less developed countries are inextricably interwoven with the patterns of industrial concentration and of unequal regional development imposed on them by their dependency relations with the more developed market economies.

Migrant selectivity

The study of migrant selectivity permits one to specify the rapidity with which different groups of the population subject to the risk of migrating will react to changes in the determining factors.

Studies conducted in Africa, Asia and Latin America have established beyond doubt that rural-urban migrants are predominantly young adults.[39] It has also been universally found that the educational levels attained by rural-urban migrants is higher than those attained by those who remain in their communities of origin. On the contrary, there does not appear to be a common pattern with respect to sex characteristics of migrants. Although young women predominate in rural-urban, and apparently in urban-urban movements in Latin America,[40] no single pattern is found in Africa. Although most studies of Africa[41] report higher proportions of adult males in relation to females, the proportion of women seems to be increasing and in some cases it has been found to be even larger than the proportion of males. Such is, for instance, the case in the Ivory Coast and in the United Republic of Cameroon.[42] Similar changes in sex domi-

[35] Armando di Filippo, "El desarrollo y la distribución espacial de la población en América Latina", *Notas de Población*, Año III, vol. 7 (April 1975), pp. 43–70; Guillermo Geisse and V. L. Coraggio, "Areas metropolitanas y desarrollo nacional", *Revista Eure*, vol. 1, No. 1 (1970); Alejandro Rofman, *Desigualdades regionales y concentración económica: el caso argentino* (Buenos Aires, Ediciones SIAP, 1974).

[36] See, for example, S. Amin, op. cit.; Joel W. Gregory, "Development and in-migration in Upper Volta", in Samir Amin, ed., *Modern Migrations in Western Africa*, International African Institute Series (London, Oxford University Press, 1974), pp. 305–320; R. J. Pryor, "Migration and the process of modernization", in Leszek A. Kosiński and R. Mansell Prothero, *People on the Move: Studies in Internal Migration* (London, Methuen and Co., Ltd., 1975), pp. 23–36.

[37] Wahidul Haque and others, "Towards a theory of rural development", *Development Dialogue*, No. 2 (1977); pp. 11–137; and John Friedmann and Mike Douglass, "Agropolitan development: towards a new strategy for regional planning in Asia", in *Growth Pole Strategy and Regional Development Planning in Asia* (Nagoya, Japan, United Nations Centre for Regional Development, 1976), pp. 333–387.

[38] Louis Lefeber, "National planning and regional decentralization", in Antoni R. Kukliński, ed., *Regional Development and Planning* (Leyden, Stycoff, 1975), pp. 285–294.

[39] For a summary of the available information for Africa and Asia, see A. Simmons, S. Diaz-Briquets and A. A. Laquian, op. cit.; for Latin America, see R. Urzúa, op. cit.

[40] Joop Alberts, *Migración en areas metropolitanas de América Latina: un estudio comparativo*, CELADE Series E, No. 24 (Santiago, Chile, 1977); Jorge Arévalo, *Migraciones*, fasc. V of *Encuesta demográfica nacional de Honduras*, CELADE Series A, No. 129 (Santiago, Chile, 1975); Jorge Arévalo and Ferrando, "Encuesta demográfica nacional del Perú: migraciones", Santiago, Centro Latinoamericano de Demografía, 1978 (mimeographed).

[41] J. C. Caldwell, op. cit.; E. Forde and M. E. Harvey, "Migration to Freetown", *Sierra Leone Geographical Journal*, vol. 13 (1969), pp. 13–27, as cited by A. Simmons, S. Diaz-Briquets and A. A. Laquian, op. cit., p. 28.

[42] Louis Roussel, "Ivory Coast"; and André Podlewski, "Cameroon", in John C. Caldwell, ed., *Population Growth and Socio-Economic Change in West Africa* (New York, Columbia University Press, 1975), pp. 657–678 and 543–564, respectively.

nance in the migration flows have been recently reported in a review[43] of population and development studies in East Asia and Eastern South Asia.

Lastly, there is evidence showing that income elasticities (the percentage of increases in immigration if income is increased a certain percentage) are higher for migration to cities of professionals, managers and white-collar and industrial workers;[44] and that, in general, migrants to cities tend to have a higher occupational status than non-migrants in their communities of origin.[45]

Although the foregoing discussion covers the most general selective characteristics of migrants, there appears to be some empirical support for the proposition that selection tends to be bimodal, particularly by occupational class or education,[46] This situation was, for instance, found in a study[47] of some villages in Bangladesh, where intra-rural inequality has as its consequence that the migrants originate mainly from two economic classes—the economically poorest and the economically richest families of the rural community. As could be expected, migrants belonging to rich families have higher than average education, while poor migrants are mostly illiterates. Movements in the latter case tend to be rural-rural and short distance; in the former case, they are mainly rural-urban and long distance. "Positive selectivity,"[48] to use Lee's term, would then be found among rural-urban migrants while negative selectivity would characterize rural-rural migrants.

From a more dynamic perspective, there is some evidence suggesting that migrant selectivity tends to decrease in time either as a consequence of the more routine character that migration acquires in later periods or because the extension of educational services to the countryside has made the educational levels of the rural population more homogeneous.

Some general conclusions as to the state of knowledge concerning migration determinants and migrants' selectivity

It is now possible to reach some conclusions as to the state of knowledge concerning migration determinants and its adequacy for linking different forms of development with patterns of population redistribution. Indirectly, it is also possible to make an assessment as to the policy relevance of the available knowledge.

The foregoing review revealed a very uneven distribution of research efforts along the levels into which studies on the subject were classified. It is clear that more is known about the motivations to migrate (as retrospectively reported by individual migrants) than about the process leading to the decision to migrate or not to migrate. In fact, studies of the decision-making process at the individual and family levels leading to decisions to out-migrate or to remain in the same community are almost non-existent. The assumption that the decision is economically rational and hence that migration occurs when the costs of staying in a community are higher than the benefits of moving minus transportation costs is a handy but unsatisfactory alternative for such studies. Although that assumption is compatible with some of the main findings of econometric studies and with the reasons for migrating which immigrants to the cities report retrospectively, it cannot explain why individuals and families who have similar economic conditions and are equally motivated decide not to move. Moreover, as is suggested below, the adequacy of such an assumption to the actual decision-making process may in itself be a function of the position the prospective migrant occupies in the social structure of his or her community of origin.

As stated earlier, the state of the art is considerably better with respect to the motives for migrating given by individual respondents to survey questions so that some very broad generalizations concerning the most important reasons can now be made. The main gap at this level appears to be the limited knowledge of factors other than sex, age and marital status which might explain differences in the saliency of specific motives. From a policy-relevant viewpoint, and if a policy goal is to change the social composition of migratory flows, more attention to the position of migrants in the social structure of their communities of origin prior to out-migrating would be particularly useful.

The review of the literature has shown that econometric studies including such variables as wage or income levels and unemployment rates are also well represented and come to fairly similar results.

Unfortunately and in great part due to lack of adequate data, differential responses by socio-economic groups are generally not taken into account in econometric studies, thus causing problems with respect to interpretation of findings and determination of the most efficient means to achieve desired migration goals for specific subgroups.

However, census-based econometric studies do provide some basic guide-lines for policy actions. In general, they suggest what mix of economic and social policies might be most appropriate for slowing down rural out-migration or for reorienting its flows. Their

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[43] G. W. Jones, op. cit.

[44] Manuel J. Carvajal and David T. Geithman, "An economic analysis of migration in Costa Rica", *Economic Development and Cultural Change*, vol. 23, No. 1 (October 1974), p. 114.

[45] Alan B. Simmons and Ramiro Cardona, "La selectividad de la migración en una perspective histórica", in Conferencia Regional Latinoamericana de Población, *Actas* (Mexico, 1972), pp. 622–631; Pamela Briggs, "Migration to urban areas", Economic Staff Working Paper, No. 104, Washington, D.C., World Bank, 1971; J. Alberts, op. cit.

[46] Everett S. Lee, "A theory of migration", in John Archer Jackson, ed., *Migration* (London, Cambridge University Press, 1969), pp. 282–297.

[47] R. H. Chaudhury, "Determinants and consequences of rural outmigration: evidence from some villages in Bangladesh", International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980s, Helsinki, 1978, Solicited Papers* (Liège, n.d.).

[48] E. S. Lee, loc. cit.

main weakness, however, is with respect to policies directed towards modifying the socio-economic composition of these flows. The proposed measures usually are designed to increase rural wages and to expand employment opportunities in the countryside and in an alternative destination, to be implemented in conjunction with income-reducing policies in the cities. The success of such programmes, however, depends upon how direct economic determinants relate to more general development trends and upon existing political constraints.

Moving to the next level, most of the discussion of how more general development trends at the national, regional or sectoral levels affect the determinants of migration and, consequently, the volume, direction and composition of migratory flows and their interrelations in the whole migratory process, is speculative or based on a few, not always rigorous and systematic, observations. Although the adoption by currently developing countries of a development strategy based on import substitution is usually blamed for the concentration of opportunities in the largest cities, few attempts to test this assertion historically or comparatively have been made. Neither have there been significant research efforts to link alternative development trends to the economic determinants most often included in econometric studies and to other more neglected but hypothetically at least equally important social determinants, such as changes in social stratification and social relations, in the local power structure and in occupational roles; or to cultural factors, such as kinship, ethnic or tribal ties and local norms and values.

A review of the literature has also pointed out a lack of knowledge concerning the impact of public policies, often unintentional, on migration. Lastly, migration studies have thus far almost completely ignored the analysis of the dominant power structure and the decision-making process behind public policies that affect the determinants of migration.

C. A TENTATIVE APPROACH FOR STUDYING THE DETERMINANTS OF INTERNAL MIGRATION AS RELATED TO VARIOUS FORMS OF DEVELOPMENT

The review of the literature has shown that the nature of the mechanisms affecting the prevailing trends of population distribution is such that at least the following levels of analysis must be taken into account and interrelated: broad structural changes associated with the level and dynamics of development as well as with the particular form of development actually followed; socio-economic and environmental factors identified as direct determinants of population trends and in great part determined by more permanent structural features and by the form of development adopted; social classes, or specific social groups differentially affected by those socio-economic determinants; cultural and socio-psychological factors operating at the family and individual levels, respectively; and, lastly, some characteristics of potential and actual migrants, such as sex and age. To different degrees, directly at certain levels and indirectly at others, through actions or abstentions, the State is influencing all but the last level.

Figure III shows the different levels of determinants to be considered, some examples of them and their most basic links. A brief discussion of the diagram will make it possible to outline the basic characteristics of an approach that, it is hoped, might lead to studies that would avoid some of the weaknesses detected in this review of the state of the art concerning migration determinants. In doing so, the discussion begins at levels closer to the act of migrating and moves from them upward to the more macro-structural factors and then to the different types of policies with direct or indirect population redistribution effects.

Family strategies and population redistribution

A basic proposition of the approach here suggested is that more often than not the basic unit of analysis for studying migration (as well as other demographic behaviour) in developing countries is not the individual taken in isolation but the individual as a member of a family unit. In its turn, the family is seen as occupying a position in the economic and social structure that affects both how it is organized and the different strategies it adopts either to survive or to move upward in the social ladder.

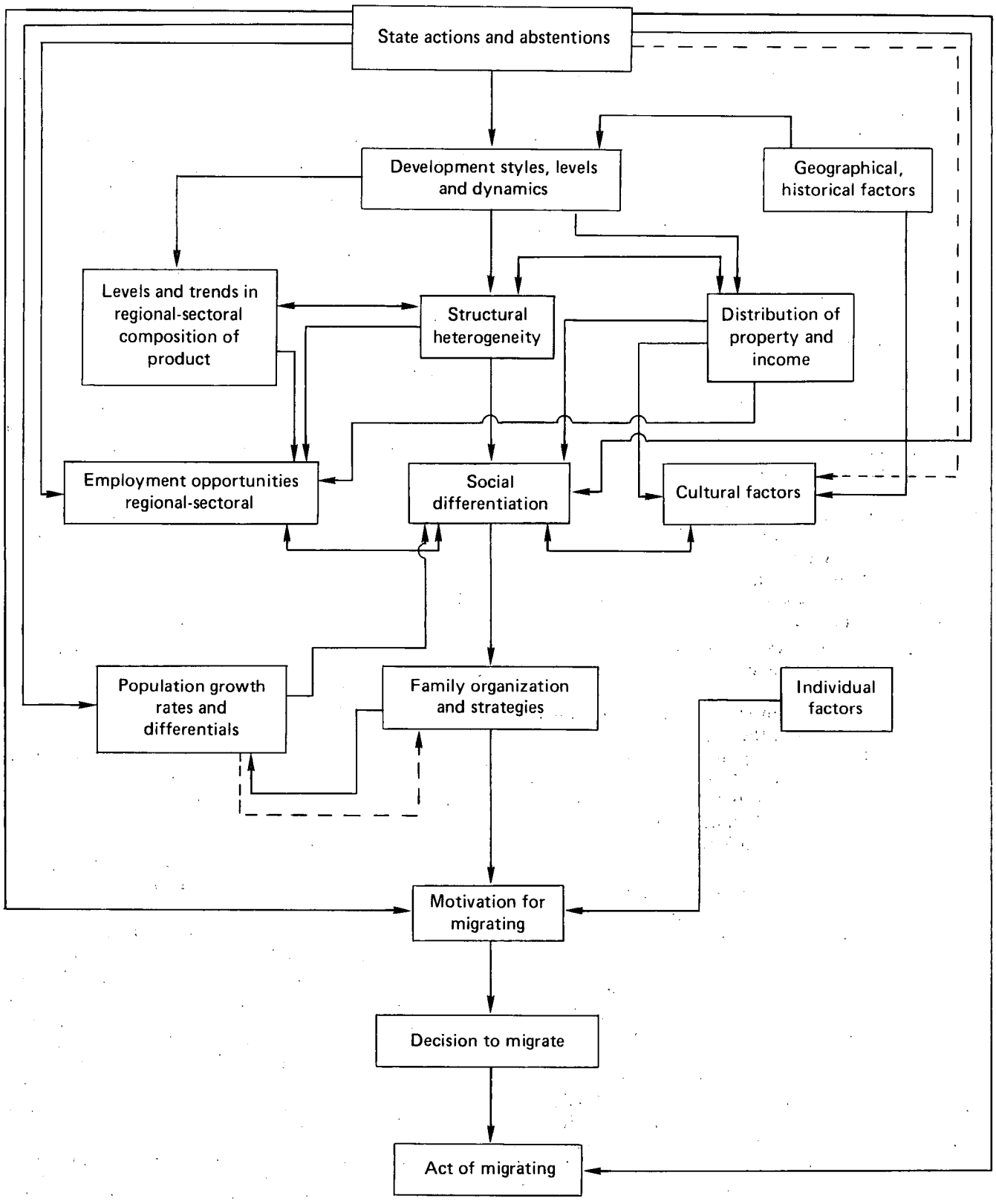
The choice of the family as the basic unit of analysis brings as a consequence that vis-à-vis the potential individual migrant the impacts of social, economic and cultural determinants of migration are considered to be actually filtered down to him and either weakened or strengthened by the family to which he belongs. Thus, although the motivation to move is always individual, it cannot be explained solely by the socio-economic and cultural conditions prevailing in places of origin and of destination; it must also be explained by the way in which the family organizes itself to cope with those conditions and their changes through time and by the position the individual occupies within the family.

As figure III suggests, the approach adopted here considers that, depending upon the type of family organization prevailing in the specific country and region under analysis, but up to a certain point present in all of them, the decision on which member is to migrate, where to, for how long and when is made directly by the family head or is heavily influenced by his or her opinion and those of other adult family members.[49]

The position a family occupies in the economic

[49] An important part of that decision is often the provision for the prospective migrant of the economic means to pay for transportation costs to the place of destination. Certainly, extremely poor families might not have any means to pay for the costs, but this is not the only aspect to be considered. Depending upon how the different roles are allocated within the family organization, members of families above the extreme poverty line may not have access to cash income or to economic means in general, except through the family head.

Figure III. Mechanisms of population redistribution through migration



structure determines in great part its actual level of living and the possibility for its members to improve it in the future. Families belonging to certain social classes and groups are subject to living conditions that barely allow them to survive, while others have already solved the survival problem and look more to ways to improve the lot of their members as a whole or at least that of some of its members.

The different ways in which the family mobilizes its available human, economic and social resources so as to achieve its survival or mobility goal is here called its "survival" or "mobility" strategy.[50] Two important components of such strategies within the context of this paper are, on the one hand, the adoption of an internal division of labour by sex and age (full, partial or no participation in economic activities and levels of education to be reached); and, on the other hand, the adoption of patterns of nuptiality, fertility and migration suited either to maintain or to improve their levels of living.[51]

Migration of the whole family or of some of its members would then be part and parcel of a more general family strategy to cope with changing socio-economic, cultural and demographic conditions. Other possible responses, like celibacy, postponement of marriage, abortion and contraceptive practices, would affect, intentionally or not, the rate of natural population growth through lower fertility and can also be considered an integral part of a family strategy.

Migration and fertility responses to changing conditions are mutually interrelated. The strength of that relationship is probably a function of the likelihood that some family members might find employment in other rural areas or in the cities, as well as of the type of family organization and of the intra-family division of labour. Making use of a recent concept,[52] hypothetically it might be expected that the more the intergenerational wealth flows go from children to parents, and consequently, the stronger the norms requiring adult migrant sons to make remittances to their parents and relatives or to pay for the education of younger brothers and sisters, the weaker the relationship between out-migration and fertility decline will be. Family structures and linkage systems favouring intergenerational wealth flows from children to parents and elders would then have a double impact on fertility: on the one hand, children remaining in the household begin at a very early age to participate in productive activities, thus allowing one of their parents to migrate temporarily, if this is necessary as a part of the family's survival strategy; on the other hand, remittances from the city by migrant sons alleviate the parents' economic burden of raising additional children.[53]

The identification of two different strategies connected to the decision to migrate has some important implications for an understanding of the mechanisms determining the volume, composition and direction of migration flows. A common distinction in migration literature is that between voluntary and rational migration flows, on the one hand, and non-voluntary mobility initiated by a force outside the individual's control, on the other; or between "autogenic" and "allogenic" spatial mobility.[54] Inasmuch as the interest here is in identifying basically non-coercive mechanisms of population distribution, only the first type of movement is analysed. Although by definition all of them are considered to be basically rational demographic responses which are part of a family strategy to cope the best it can with socio-economic, cultural and demographic conditions both at places of origin and at potential places of destination, the degree to which the decision-making process approximates a model of economic rationality will vary considerably, depending upon whether the spatial movement is part of a survival or of a mobility strategy. Where the range of alternatives from which to choose is very small or almost non-existent, either for the population as a whole or for the families belonging to the poorer social groups, that model will probably be very far removed from the actual decision-making process. On the contrary, it might be a useful analytical tool when survival is not at stake and there is a much wider range of alternatives open to the family as a whole and to its individual members. Consequently, the adequacy of cost-benefit models, such as those developed by Todaro[55] and followers or of the human investment approach first formulated by Sjaastad[56] will depend upon

[50] For previous uses of the concept "family strategy", see, for instance, G. W. Jones, op. cit.; and A. D. Goddard, "Population movements and land shortages in the Sokoto close settled zone, Nigeria", in Samir Amin, ed., *Modern Migrations in Western Africa*, International African Institute Series (London, Oxford University Press, 1974), pp. 258–280. The concept "survival strategy" has been widely used by the "structural-historical" school of Latin American social scientists with reference to fertility behaviour and other related phenomena. See S. Torrado, "Clases sociales, familia y comportamiento demografico", paper submitted to the Seminar on Theoretical and Methodological Aspects of Population Research, Mexico, Consejo Latinoamericano de Ciencias Sociales, Comision de Población y Desarrollo, 1976; and Centro Latinoamericano de Demografía, Programa de Investigaciones Sociales sobre Población en América Latina, "Convocatoria", Santiago, Chile, 1978 (mimeographed).

[51] Thus defined, family strategies are closely linked to the theory of multiphasic response formulated years ago by Kingsley Davis, "The theory of change and response in modern demographic theory", *Population Index*, vol. 29, No. 4 (October 1963), pp. 345–366; and later reformulated in David V. Glass, "Population growth and population policy", in Mendel C. Sheps and Jeanne C. Ridley, eds., *Public Health and Population Change: Current Research Issues* (Pittsburgh, Pennsylvania, Pittsburgh University Press, 1965), pp. 3–24; and in O. Friedlander, "Demographic responses and population movements", *Demography*, vol. 6, No. 4 (November 1969), pp. 359–381.

[52] Formulated by John C. Caldwell, "Towards a restatement of Demographic Transition Survey", *Population and Development Review*, vol. 2, Nos. 3–4 (September–December 1976), pp. 321–366.

[53] For a similar type of reasoning, see Oded Stark, "Income distribution, fertility decisions and the shadow wage rate: implications of a new approach to rural to urban migration in less developed countries", in International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980s, Helsinki, 1978; Solicited Papers* (Liège, n.d.).

[54] To use the terms coined by R. J. Pryor, loc. cit.

[55] *Internal Migration in Developing Countries.*

[56] Loc. cit.

the degree to which the structural and contextual factors operating at places of origin lead to the relative prevalence of families following one or another strategy.

Migration will reveal different characteristics depending upon whether it is part of a survival or a mobility strategy.[57] In the first place, migrants moved by a survival strategy will come, by definition, from poorer families and be less educated than those following a mobility strategy. Secondly, and again by definition, "survival" migrants will be pushed by poverty and unemployment, while "mobility" migrants will be mostly pulled out by the prospects of better economic and social opportunities in the city. Thirdly, "survival" migrants will tend to be rural-rural migrants or circular migrants in search of whatever work they might get. Even when they move to the city they will probably do it for lack of opportunities in the rural areas and because they have relatives living in the city, rather than as an economically rational decision where wages and employment opportunities in the short and long run are compared so as to choose that place of destination which offers the best long-term benefits. "Mobility" migrants, however, will tend to be townward and to be mainly urban-urban migrants, their decision at least approximating a model of economic rationality.

However, when the form of development being followed by a country or specific government policies have decreased employment opportunities and have lowered the levels of living in the rural areas, or the adoption of new technologies and more advanced modes of production has completely reshuffled social relations and structures in those areas, members of the social groups most affected by those changes may tend to out-migrate as part of a survival strategy which may very well lead them to towns, as well as to other rural areas.

In sum, social, economic, cultural and demographic structures and processes, both in places of origin and in places of destination, are conditioning the positions and perspectives of the families of potential migrants, the ways they are organized, and the strategies they adopt to cope with the challenges raised by those structures and processes.

The structures and processes that influence population distribution through shaping family strategies are discussed below.

[57] Distinctions resembling that presented here are not uncommon in the literature. Thus, Petersen, in his classic article on the typology of migration, distinguishes between innovating and conservative migration, depending upon whether the persons move "as a means of achieving the new" or "in response to a change in conditions, in order to retain what they have had". William Petersen, "A general typology of migration", *American Sociological Review*, vol. 23, No. 3 (June 1958), p. 258. It is also related to the distinction between the active risk-takers and passive respondents made by S. E. Findley, op. cit. Even closer to the distinction advanced here is that recently made between poor migrants who are pushed and rich migrants who are pulled out of rural Bangladesh, by R. H. Chadhury, loc. cit. Lastly, it also resembles the bimodality in migrant selectivity discussed in E. S. Lee, loc. cit.

Social differentiation, labour markets and cultural integration as mechanisms of population redistribution

This is the level at which those economic, social and cultural factors usually included in econometric studies operate (income levels, employment opportunities, education, degree of urbanization, stock of migrants in place of destination etc.). Their links with family organization and strategies and with more macro levels of analysis are better grasped if they are conceptualized as elements of broader structures and processes, rather than as separate factors. Central to them is the process of social differentiation at the national, regional and community levels and the way in which it crystallizes into a system of social stratification and social classes. The number of social classes or other hierarchically differentiated social groups and the changes in their relative importance through time; the conditions of existence or levels of living of each class or social group (as measured by income levels, average degree of education, housing and health conditions etc.); the degree of intraclass and interclass inequality in them and the opportunities open for mobility between classes in rural and urban areas and in different cities and regions, are all aspects of that process which at the same time embrace a good number of socio-economic factors identified in the literature as migration determinants.

A second set of factors relates to the structure and functioning of the labour market at the national, regional and community levels. The composition by age, sex and skill level of the labour force, its size and rate of growth and the characteristics of the demand for it (volume, rate of growth, skill and occupational levels, seasonality etc.) inasmuch as they determine the degree to which the labour force in each region and in urban and rural areas is being fully employed—or, on the contrary, under-employed or unemployed—are certainly basic points to be considered here. A related problem of equal but less recognized importance is the degree to which there really is a national labour market instead of a set of rather segmented regional or sectoral markets. Closely related is the other problem of the degree to which formal and informal labour markets can be distinguished and the possibility of moving from one to the other. The volume, composition and direction of migration flows is conditioned by those three sets of problems and not only by the first.

A third important process affecting migration is the level of cultural integration and disintegration. The degree of cultural integration at the community and regional level, as expressed by the presence of shared world views, values, beliefs and norms; and the degree of cultural distance between city and countryside and between the potential migrants and the urban culture, are in great part influenced by the degree of social differentiation reached at the community and regional levels, but they are also affected by the degree and the patterns of urbanization, by the diffusion of mass media; and by government policies concerning

transportation facilities between town and country, school allocation etc.

Those three sets of structures and processes include, in the present author's opinion, most if not all of the factors currently known to affect the volume, composition and direction of migration flows. In the approach suggested here their impact is mediated by the type of family organization found in a specific region or community, which in turn shapes both the motivation to migrate of individual family members and the decision as to which family member is to move.[58]

As is evident, two factors usually included in econometric studies are not explicitly considered, namely, distance and population growth. Distance is, in fact, included; but it is broken down into the level of living of families and individuals, as related to the cost of moving, and as cultural distance between places of origin and of destination.

As to population growth, its effects seem to occur mostly if not exclusively in close interaction with some of the structures and processes already mentioned. The clearest example of this interaction is the role played by population growth in the imbalances between demand and supply of labour force. Of course, if participation rates remain relatively constant, the higher the rate of population growth the higher the rate of growth of the labour force will be. However, in situations of extremely high population densities, underutilization of labour appears to be quite independent of rates of population growth and is mainly due to factors affecting demand.[59]

In other cases, the interaction occurs between relatively high rates of population growth and land-tenure systems conducive to high concentration of land and property and to the proliferation of large numbers of peasant families with little or no access to land. High rates of natural growth due to decreasing mortality cannot but worsen the level of living of such families and force some of its members to out-migrate.[60]

Moreover, natural growth differentials by class and social strata, which may very well be increased at the first stages of the demographic transition, are probably aggravating inequities in levels of living between those classes and strata, thus constituting an additional though not independent pressure to migrate.[61]

Indirect macro-structural mechanisms of population redistribution

The determinants of population trends in general, and of population redistributive patterns in particular, vary in their relative importance and in how they all combine depending upon the form of development a country has had and is actually following. The links between the two occur through a number of factors directly derived from the choices made concerning the form of development adopted. Because they influence population trends only through the more direct mechanisms already discussed, they can be called indirect macro-structural mechanisms of population redistribution.

The list of such factors is by no means short but they can all be subsumed under three basic categories: differences in economic development and economic structure between regions; degrees of structural heterogeneity, that is, differences in productivity by sectors, regions and types of firms; and degree of income inequality by classes, strata and social groups. These factors directly affect some characteristics of the labour market, such as the volume and type of labour force being demanded in different sectors and regions; and, consequently, the degree to which the labour force is being fully utilized and the degree of labour market segmentation by sectors and regions. They also affect the profile and dimensions of the social stratification system (sectorally and regionally), the levels of living of different strata and the opportunities for upward mobility between them. Indirectly, through their impact on labour markets and the stratification system, they also affect family strategies and organization.

Other direct determinants of population trends derive more, though always partially, from policies that in themselves help to define a development style than from other macro-structural factors. Such is the case of the levels of living of different classes, strata and social groups, and of some of the cultural determinants, which are significantly influenced by government policies affecting horizontal (by regions and areas) and vertical (by classes and strata) access to and characteristics of health, educational, housing and social security services.

Styles of development and the mechanisms of population redistribution

All the main intervening mechanisms affecting population distribution have been briefly presented

[58] Lest this discussion lapse into a socio-economic and cultural determinism, it should be remembered that the motivation to migrate, as all other motivations, is a socio-psychological response to external conditions influenced to an important degree by biological characteristics and by strictly individual experiences, and not only by internalized cultural patterns or by the position the individual occupies in the social structure.

[59] According to the most recent study on the subject, rural rates of natural increase and rural net out-migration rates in 29 developing countries of Africa, Asia and Latin America were found to be practically uncorrelated (0.08) and all the regression equations intended to predict from among a number of indicators the annual rate of net out-migration show the rate of rural natural increase to be insignificant. See *Patterns of Urban and Rural Population Growth*, p. 31, table 13; and p. 32, table 14.

[60] For empirical evidence showing the relationship between land tenure and migration, see R. Paul Shaw, "Land tenure and the rural exodus in Latin America", *Economic Development and Cultural Change*, vol. 23, No. 1 (October 1974), pp. 123–132; and R. H. Chaudhury, loc. cit.

[61] For some hypotheses on this subject, see J. Potter, "Demographic factors and income distribution in Latin America", in International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980s, Helsinki, 1978; Solicited Papers* (Liège, n.d.).

above. The remaining task is to find ways of conceptualizing and of empirically defining forms of development which, through their differential impact on those intervening mechanisms, might hypothetically be able to account for differences and similarities in patterns of population redistribution, both between countries that have adopted one or another form and within a single country when that form is changed.

As is currently well known and widely accepted among development planners, the experiences of both the more developed and the less developed countries have shown that there is not a single path to development; countries differ as to the goals they adopt as desirable and the means they use to achieve them. Of course, one very important distinction is that between countries with centrally planned economies and those with market economies. Nevertheless, such a distinction is too broad to account for the very different historical experiences of countries that share the same economic system.

To be sure, some of those differences are due to the different levels of economic development that countries with one or another system have reached, and they tend to diminish when that level is controlled for. That aspect notwithstanding, the main point to be stressed here is that an important source of differences between countries that have adopted a similar economic system (centrally planned economy or market economy) and have reached similar levels of development is the different styles of development they have adopted, that is, as stated in a United Nations report, "the empirically observable system of interrelated changes: in levels and structures of production; in participation of different classes and groups in economic, social and political activities; in the distribution of incomes and wealth; in patterns of consumption; in institutions; in systems of values, attitudes and motivations".[62]

The concept has gained fairly general acceptance in branches of the United Nations, particularly among some of the economists working for the Economic Commission for Latin America. More recently, it became one of the main concepts behind the general approach adopted by the Latin American Programme of Social Science Research Relevant for Population Policies (PISPAL). Still more recently the need to study the relationships between styles of development and population dynamics has been urged by the International Review Group of Social Science Research on Population and Development (IRG) upon the community of population scientists and population policy analysts.[63]

It is necessary to recognize, however, that despite its recent popularity, the exact meaning of the concept needs to be clarified further before it can be considered a useful tool for historical and comparative analyses of how development trends affect population dynamics in general and the patterns of population distribution in particular.

One way of moving towards a more precise meaning of the concept is to think of a style of development as the end-product of how each country has actually answered some basic and unavoidable questions, namely: the production of which goods is to be favoured; who is to produce them and for whom; how and where are they to be produced; how the economic and social benefits are to be distributed; and what role is the State to play in the overall guidance of the entire economic process.[64]

The question about which goods are to be produced is in fact a way of identifying the key development sector or sectors. If one looks at the currently less developed countries, it may be said that all of them have gone through a stage at which the agricultural and/or the mining sector, and within them one or a few products, have been the key sectors in the initial development efforts. But once that initial stage is surpassed, three alternatives are open to them: (*a*) to make the rural areas and the agricultural sector their springboard for further development; (*b*) to concentrate efforts on the manufacturing sector and within it to move from the manufacture of consumption goods to intermediate goods and later to capital goods; or (*c*) to choose between different combinations of agricultural, mining and industrial products, depending upon the natural and achieved comparative advantages in the world economic market.

To ask for whom goods are produced is to find out which demand the productive system is trying to satisfy. The two basic alternatives are to produce either for the foreign market or for the internal market, with some intermediate combinations. In the first case, it is also important to distinguish whether foreign trade is heavily dependent upon demand from one or a small number of countries, whether it is oriented to regional or subregional common markets or whether it is widely diversified in a number of countries from different regions. In both cases, production may be attempting to satisfy the needs and preferences of the upper and middle social strata or those of the lower social strata.

The question concerning the main productive agents asks for the role assigned to private enterprise and the State in economic activities. Of course, the polar types correspond to two different economic systems (market economies and centrally planned economies) rather than to different styles within a single system. That point notwithstanding, within both economic systems, and in particular, in market economies, broad differences exist with respect to the relative importance given to one or another agent. The market economies

[62] United Nations, Economic and Social Council, Commission for Social Development. "Report on a unified approach to development analysis and planning; preliminary report of the Secretary-General" (E/CN.5/477), Geneva, 1972, para. 28.

[63] International Review Group of Social Science Research on Population and Development, op. cit.

[64] For a basically similar approach towards a more precise definition of styles of development, see Aníbal Pinto, "Styles of development in Latin America", *CEPAL Review*, First Semester, 1976 (United Nations publication, Sales No. E.76.II.G.2), pp. 131–172.

among the less developed countries differ, among other things, in the degree to which they rely upon multinational corporations, upon private national capital, upon the State as entrepreneur or upon a combination of some or all of them, as the main productive agents.

The question as to the way in which commodities are produced makes reference to how the factors of production are combined and, consequently, the main ways of organizing production at the level of firms. One well-known distinction is that between the types of firms found in pre-market economies, market economies and centrally planned economies. Although from a dynamic viewpoint such a distinction is useful in understanding some of the socio-economic changes most closely related to population changes, it seems important to make finer distinctions taking into account the relative importance of capital, labour and technology, as well as the degree of separation and the type of relationship between the first two. In fact, the necessary distinction between firms using capital-intensive and those using labour-intensive technology cuts across the distinction between firms in market economies and those in centrally planned economies. On the other hand, both market and mixed economies may be quite similar at the level of firms and in both of them co-operative arrangements and other types of "self-managed" firms may be important.

The question concerning where goods are produced refers to the spatial allocation of economic activities and to whether the State plays an active role in the decision as to where to allocate productive units; or, on the contrary, whether that allocation is determined mainly by private decisions.

The next question contributing to the definition of a style of development is whether the State plays an active role in the redistribution of property and income, and in providing such social benefits as housing, health services, education and social security, so as to ensure that they shall be equitably distributed among different regions and among the social strata and classes of the country. The polar alternatives in this case are, on the one hand, the absence of any redistributive policy; and, on the other, the active intervention of the State so as to put both a floor and a ceiling to the levels of living of social classes and social strata and to ensure everyone the satisfaction of their basic needs. In practice, however, both polar types are difficult to find empirically. Very few, if any, Governments of countries with market economies have implemented a comprehensive set of policies directed towards the satisfaction of the basic needs of the poorest social strata. But also, most Governments adopt education, health and social security policies with at least some implicit redistribution goal. Thus, rather than discussing polar types, it seems more realistic to define a style of development by examining the presence or absence of property and income redistributive policies and by determining the coverage and the major, actual beneficiaries of "social" policies.

The final style-defining question is who controls the whole economic process. Although it is true that this question is not independent from the previous questions, it nevertheless helps to clarify situations not completely covered by them. As is well known, concrete historical situations show a wide spectrum between no state planning at all and central planning, with different degrees of state attempts to guide the economic process in between.

Except for the last, all the questions defining a style of development are formally unrelated to one another. Nevertheless, since not all possible combinations of answers have the same probability of being found empirically, the number of actually identifiable styles is much smaller than those formally possible.

It should be clear at this point that, as presented here, the concept of "style of development" does not require Governments to give a coherent set of answers to the questions given above. Neither does it require those answers to be integrated into a well-rounded development strategy. Rather, the identification of the style followed by a country forces the observer to take into account policies that are often contradictory, as well as to make an estimate of what their net balance has been with respect to each of the questions raised. Moreover, what matters are the objective and the overall influence of government actions and abstentions on the intervening mechanisms and not the goals and objectives only formally stated in specific public policies or in general development strategies.

Styles of development and public policies

Because the role assigned to the State in the economic and social spheres and the set of policies actually implemented by a Government are the empirically observable answers to the questions listed in the previous section, the concept of style of development inevitably leads to the political realm.

In approaching the role of the State in attempts to redistribute population within the boundaries of a given country, it is convenient to distinguish between:

(*a*) State actions or abstentions directly related to the policy options which define a specific style of development, here called "style-defining policies". These policies may or may not have a population objective in mind;

(*b*) Policies intended to counterbalance some of the negative effects of such actions and abstentions, which can be labelled "remedial policies". Employment, housing, education and health policies are well-known examples of this type. Again, they may or may not have a population objective;

(*c*) Policies directed towards directly affecting a population variable, such as the rates of natural growth of specific regions and groups, the motivation to migrate or the act of migrating as such. These may be called "direct population policies".

The emphasis given in this paper to styles of development as shaping in the longer term the main trends

of population distribution inevitably raises the question whether it is possible to completely change it in the short or medium run, if this is deemed necessary to avoid its negative population consequences.

The possibility of adopting a style of development different from that currently being followed is in part contingent upon the natural resources endowment and, in general, the geographical characteristics of the specific country. It is also affected by the degree to which the style preferred would require for its adoption drastic changes in social structure and in cultural traditions. In the third place, the level of development already reached by the country, its dominant economic system and its current style of development leave a structural imprint which, although never completely irreversible, certainly conditions at least the starting-point and the initial stages of the newly adopted style.

Another general factor conditioning the choice among different styles, in great part derived from the other three, is the degree of dependence or independence of the economy of the country as concerns international trade and foreign markets.

Lastly, other conditioning factors are the demographic characteristics of the population, in particular its size, its rate of growth, its age and sex composition and its geographical distribution. Although in the long run these characteristics as well as the other general conditioning factors will be changed, the already acquired demographic momentum sets limits to the possibility of changing the rates of growth in the short or even the medium run. It is equally difficult to attempt drastic changes in the patterns of population distribution if extremely coercive measures are not considered.

However, all the factors given above only set limits to the range of possible options; they do not determine completely which will actually be followed. To explain why a certain style has been adopted in a country and to give a minimum basis of realism to prescriptions for a change of style it is necessary to examine not only those general conditioning factors but an entire set of political and ideological factors. The most important of these factors have recently been identified as follows:

> "(i) the State, as the source which generates policies, and the political régime (dominant coalition plus political resources) which formulates (or chooses) the style and promotes it in an attempt to impose it on society through a strategy whose policies, both in means and objectives, are supposedly appropriate; (ii) the different social groups and classes which have power, resources, promote their interests and propose alternative policies; (iii) the conflicts which stem from the incompatible (or irreconcilable) aspirations of the various groups either within or outside the circles of political power and of State administration, whose claims, divergencies and antagonisms increase or restrict the possibilities of carrying out the current development strategy; (iv) the structural features, ideological frameworks and historicosocial circumstances and trends which limit the possible objectives and condition the rules of the game; (v) the possibilities of legitimizing a style through varying combinations of consensus and coercion".[65]

Because the whole political power structure of a society is involved in the actual style of development followed by a country, to change it drastically requires deep political changes. No wonder, then, that proposals for a change in style of development in order to obtain changes in the patterns of population distribution do not usually raise much enthusiasm among politicians and public officials who, after all, occupy those positions as members of the dominant coalition.

Fortunately, remedial and direct population policies are other less radical options open to Governments. In so far as they are successful in modifying at least partially the effects of the style of development on the indirect macro-structural mechanisms of population redistribution, or the factors related to the processes of social differentiation and cultural integration as well as on the characteristics of the labour markets, remedial policies can also become indirect population redistribution policies even if they are not combined with more direct policies.[66] Some examples of direct and remedial policies which have been implemented by various countries are:

(a) *Coercive or semi-coercive policies directed towards curtailing the migratory movement.* Some examples of such policies are: the requirement of passes to leave a rural area, to enter an urban area, to secure the transfer or use of food ration cards etc., as in China; legal prohibitions against moving to the city, as at Jakarta, Indonesia; and evidence of having secured housing, as in Cuba with reference to inmigration to Havana. Because they are oriented to restricting the actual movement and to affecting only indirectly the motivation and the decision to migrate, their success depends solely upon the ability of the Government actually to enforce those measures;

(b) *Attempts to change the motivation for migration.* Mass media campaigns showing the disadvantages of the prospective place of destination and information on employment opportunities in place of residence or in places alternative to the largest cities are two examples of this type of policy. Their success depends in part upon how convincing the messages are

[65] Jorge Graciarena, "Power and development styles", *CEPAL Review*, First Semester, 1976 (United Nations publication, Sales No. E.76.II.G.2), p. 192.

[66] Policies and programmes that have been or could be justified in terms of their effect on migration into metropolitan cities have been classified in A. Simmons, S. Diaz-Briquets and A. A. Laquian, op. cit., part IV, according to whether they try to stop out-migration, to redirect the flows to rural frontier areas to redirect them to growth poles and new cities, to return migrants to their communities of origin or to accommodate to existing patterns. More recently, a number of examples of development strategies and migration have been provided; see Gerry B. Baldwin, "Rural outmigration as a component of development strategies", in International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980s, Helsinki, 1978; Solicited Papers* (Liège, n.d.).

but to a much greater extent upon their degree of accuracy in relation to the actual situations experienced by the prospective migrants themselves or as described to them by those who have had that experience;

(c) *Measures that attempt to modify the socio-economic, cultural and demographic determinants of migration.* Efforts to narrow the rural-urban wage gap, government incentives for the use of labour-intensive technologies in rural areas and in small towns, land reform and rural development programmes, price supports for agricultural products and attempts to increase the availability of public services in rural areas are some policies intended to decrease out-migration flows from the rural areas. Administrative decentralization and relocation, regional development and industrial location policies tend in general more to redirect migration flows to places of destination other than the largest city. Lastly, even family planning programmes can be conceived as migration policies to the degree to which, if successful in lowering fertility and combined with other of the already mentioned policies affecting socio-economic and cultural determinants, they might help to improve living conditions at the family level in rural areas and small towns.

Most of these policies do not have explicit redistributive goals and a number of them may have counter-effects (educational policies, for instance). It is difficult at this moment to evaluate their impact on and efficiency in reorienting migration since in most cases they have not been studied in developing countries.[67] It is clear that their relative success will depend in great part upon the general style of development followed by a country and upon the content and goals of other policies that might also be affecting the socio-economic, cultural and demographic determinants of migration.

In general, preference for one or another level of migration determinants as a policy objective is not random but is influenced by the economic system and the development style adopted. Measures directed towards the curtailment of the actual movements are more common in countries where the State plays an active role in guiding the entire process of development, while persuasive measures are more probable where the role of the State as economic and social planner is minimized. The exceptions are measures to change the socio-economic, cultural and demographic determinants which can be implemented within the framework of any economic system and development style, although with different probabilities of success.

The impact of policies directed towards reorienting migration and attempting to change specific determinants will be contingent upon the compatibility of the specific policy with all the others being implemented. Therefore, attempts to widen the range of alternatives and efforts to evaluate the factors affecting the relative impact and efficiency of specific redistributive policies cannot avoid including in their analyses the more general political aspects referred to above. At the same time, although changes in the dominant development style are not the only way to modify the patterns of population distribution, the style sets the range of alternatives and conditions the relative success of specific policies.

Development style thus becomes the ultimate determinant of population dynamics in general and of trends in population distribution in particular, but the relationship between the former and the latter are by no means mechanical. The impact of previous styles of development is transmitted to the present through demographic inertia and through time-lags between the adoption of a style and its effects. Lastly, specific policies not fully integrated into the prevailing style may obscure the general relationship here postulated.

To conclude, the approach suggested here widens considerably the scope of policy-relevant studies on migration determinants. It also changes the priority of those studies from the analysis of individual factors to that of the structures and processes of which the factors are a part, as well as to the political factors and policy decisions underlying the stability and change of those structures and processes. At the same time it widens the opportunities for state intervention beyond the dismal recommendation that development should be completely restructured or the other equally naïve but more specific prescription of opening employment opportunities and raising wages in places other than the main destination of migration flows, without taking into account the overall development trends or the political constraints militating against the adoption of such recommendations.

[67] For a useful analysis of policies attempting to slow metropolitan city growth in Asia, see Alan B. Simmons, "Slowing metropolitan city growth in Asia: policies, programs and results", *Population and Development Review*, vol. 5, No. 1 (March 1979), pp. 87–104.

VI. POPULATION DISTRIBUTION MEASURES AND THE REDISTRIBUTION MECHANISM

*Roland J. Fuchs and George J. Demko**

Despite evidence that most developing countries consider population distribution a major population problem, as expressed at the World Population Conference in 1974,[1] and some have implemented a specific policy with respect to this problem, efforts to systematize the knowledge concerning population distribution policies have remained few in number and exploratory in character. These circumstances led to the recommendation that high priority in research be given to the "study of experiences of countries which have major programmes of internal migration with a view to developing guidelines that are helpful to policymakers. . . ."[2] It is regrettable that this recommendation has not yet had a major impact on population distribution research. A recent review[3] of migration research in developing countries states that there is a great need for studies to assess the impact of social and economic policies that might lead to population redistribution. Recent surveys[4] of population and planning in developing countries have, unfortunately, minimized or chosen to omit reference to the role of migration and redistribution policies.

The purpose of this paper is to review and assess population redistribution policy instruments employed in both developed and developing countries. This paper focuses on individual policy instruments, rather than comprehensive programmes, in order to create an awareness of the range of instruments and measures already employed throughout the world. The discussion begins with a general definition of population distribution policies and a conceptual framework for the classification of individual instruments; the second part of the paper identifies and compares policy instruments employed in developed countries, including market and centrally planned economies, and those in the developing countries; a final section analyses the instruments from the perspective of the redistribution mechanism and migration determinants.

The attention given developed countries in this work may require some explanation. Although it is true that the most serious future problems of population maldistribution will doubtless occur in the developing countries, many of which face rapid population growth and urbanization, the major reservoir of experience in population distribution planning currently rests in the developed countries, both the centrally planned economies of Eastern Europe and the market and mixed economies of Western Europe and Northern America. The Eastern European countries discussed here have long considered that centralized planning must encompass regulation of population distribution and movements in order to meet the economic development needs of the State.[5] In the post-war years the developed market economies have also manipulated population distribution as part of their less rigorous, but growing efforts at spatial social engineering.[6] Therefore, inclusion of the experiences of the developed countries is necessary to ensure coverage of the broad spectrum of policy instruments already employed in national spatial population policy programmes.

A. POLICY DEFINITION AND INSTRUMENT IDENTIFICATION

Population policy has been variously defined by many persons, very few of whom have agreed on its precise meaning and component parts. Recent statements have identified many of the difficulties of defin-

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[1] See *Report of the United Nations World Population Conference, 1974, Bucharest, 19–30 August 1974* (United Nations publication, Sales No. E.75.XIII.3).

[2] Ibid., p. 20.

[3] Alan Simmons, Sergio Diaz-Briquets and Aprodicio A. Laquian, *Social Change and Internal Migration: A Review of Research Findings from Africa, Asia and Latin America* (Ottawa, Canada, International Development Research Centre, 1977).

[4] See B. Maxwell Stamper, *Population Policy in Development Planning: A Study of Seventy Less Developed Countries*, Reports on Population/Family Planning, No. 13 (New York, The Population Council, 1973); idem, *Population and Planning in Developing Nations: A Review of Sixty Development Plans for the 1970s* (New York, The Population Council, 1977); Vincent Heath Whitney, "Population planning in Asia in the 1970s", *Population Studies*, vol. 29, No. 2 (July 1976), pp. 337–351; and Richard E. Bilsborrow, *Population in Development Planning: Background and Bibliography* (Chapel Hill, University of North Carolina, Carolina Population Center, 1976).

[5] Roland J. Fuchs and George J. Demko, "Spatial population policies in the socialist countries of Eastern Europe", *Social Science Quarterly*, vol. 58, No. 1 (June 1977), pp. 60–73.

[6] See James L. Sundquist, *Dispersing Population: What America Can Learn from Europe* (Washington, D.C., The Brookings Institution, 1975); and Organisation for Economic Co-operation and Development, *Re-Appraisal of Regional Policies in OECD Countries* (Paris, 1974).

ing and identifying policy as it relates to population issues.[7] In its most inclusive sense, population policy is a set of actions—stated or unstated, intended or unintended—by a national government or a local government, organization or interest group that affects population size, growth rate, composition or distribution. The major components of any policy should include at least six stages: (1) awareness of a problem or set of problems; (2) goal formation (including short-term and long-term goals); (3) goal adoption; (4) selection of instruments or means to achieve the set goals; (5) implementation (and enforcement where appropriate) of policy instruments; and (6) an instrument evaluation or monitoring mechanism.

The primary focus, as indicated above, however, is with the individual policy instruments comprising spatial population policies and programmes, rather than the formulation of policy or total programme packages. While aware that policy instruments devised for purposes unrelated to population redistribution may have serious, if unintended, demographic impacts,[8] the concern here is with those policy instruments intentionally formulated to effect population distribution and redistribution. Included are both the policies that have indirect impacts and those with direct effects.[9] The range is therefore quite large and encompasses economic, social and administrative measures. Identification is made even more difficult by the fact that such instruments may have their origin and locus of implementation at various hierarchical levels of government—national, regional, state or local—and horizontally in various functional agencies. Primary reliance in identifying policy instruments has of necessity been placed on secondary sources and a sampling of national development plans. However, as Pryor states:

> "Any detailed understanding of redistribution policies . . . will require recourse to more specific sources such as legislation, departmental annual reports, working papers, administrative procedures and project plans, parliamentary enquiries and consultant reports."[10]

Such a detailed understanding remains to be achieved for large regions and in particular on a global scale.

Classification of policy instruments

It is a measure of the immaturity of the study of population redistribution policies and instruments that although various classification schemes have been suggested or used, none has yet been widely adopted.[11] The classification employed here makes a primary distinction between policy measures characterized as positive, in the sense of offering various forms of incentives or otherwise encouraging growth in a particular locale; and those which are negative and offer disincentives, obstacles or prohibitions to increased population growth.[12] A secondary distinction is made between those policy measures which have as their target individuals or family units, as opposed to those which are directed towards an employing organization.

In addition to its simplicity, such a classification scheme has two virtues. In its primary division it focuses on the demographic objectives of the policy instruments, which despite the vast differences in national goals, perceptions of distribution problems, planning systems and political ideologies, can be ultimately reduced to attempts either to encourage or to limit growth in particular regions or settlement centres. In its secondary distinction—by the target of the policy instruments—it permits one to relate the instruments to the redistribution mechanism and in particular to migration determinants and migrant characteristics, a theme to be explored later in this paper.

B. Policy instruments in developed centrally planned economies[13]

A summary of the major policy instruments employed in the countries of Eastern Europe with centrally planned economies is given in table 3. Examining first the incentive measures, those designed to spur population growth by in-migration, one sees that the majority are economic in character and are closely related to national and regional economic development planning. The primary incentive measures employed in the centrally planned economies are all directed towards employing organizations: they include direct investment in job-creating enterprises, both industrial and non-industrial; and the indirect measure of investment in various forms of infrastructure. Such investments may occur in existing centres or in "new

[7] Bernard Berelson, ed., *Population Policy in Developed Countries* (New York, McGraw-Hill, 1974); Edwin D. Driver, *Essays on Population Policy* (Lexington, Massachusetts, Lexington Books, 1972); and R. Kenneth Godwin, ed., *Comparative Policy Analysis: The Study of Population Policy Determinants in Developing Countries* (Lexington, Massachusetts, Lexington Books, 1975).

[8] Such policies as trade, fiscal, transportation and credit, food price controls and social welfare programmes generally may have major, if unintended, consequences on population distribution.

[9] Myron Weiner, "Internal migration policies: purposes, interests, instruments, effects", in Warren F. Ilchman and others, eds. *Policy Sciences and Population* (Lexington, Massachusetts, Lexington Books, 1974), pp. 65–94.

[10] Robin J. Pryor, "Population redistribution and development planning in South East Asia", *Proceedings of the International Geographical Union Regional Conference*, Conference Series No. 8 (Hamilton, New Zealand, New Zealand Geographical Society, 1975), p. 79.

[11] Robin J. Pryor, "Methods of analyzing population redistribution policies", paper submitted to the International Geographical Union Symposium on Problems of Macroscale Research in Population Geography, Minsk, Union of Soviet Socialist Republics, 1976 (mimeographed).

[12] The distinction between incentives and disincentives is similar to that made by Gordon F. de Jong, "Population redistribution policies: alternatives from the Netherlands, Great Britain and Israel", *Social Science Quarterly*, vol. 56, No. 2 (September 1975), pp. 262–273.

[13] Sections B and C of the present paper are based on Roland J. Fuchs and George J. Demko, "Population distribution policies in developed socialist and Western nations", *Population and Development Review*, vol. 5, No. 3 (September 1979), pp. 439–467. There are, however, substantial revisions of this material.

TABLE 3. POPULATION REDISTRIBUTION POLICIES EMPLOYED IN THE CENTRALLY PLANNED ECONOMIES OF EASTERN EUROPE

	Policy emphasis	
Directed towards	*Positive/incentives*	*Negative/disincentives*
Employing organizations	State investments in new industrial and non-industrial enterprises	Restrictions on new industrial investments in designated cities and areas
	Expansion of existing state enterprises	Restrictions on industrial expansion in designated cities
	Investments in public and industrial infrastructure and related social overhead capital projects	Removal or transfer of existing enterprises
	Favourable transportation rate adjustments	Investments in labour-saving equipment
		Differentiated urban "rents" discriminating against large cities
Individuals and families	Expanded housing investments, provisions and assignments	Mandatory residence registration and related administrative housing or residence controls
	Increased investments in services and social overhead capital projects	Administrative and legal controls on in-migration to designated cities or regions
	Increased provision of educational opportunities	Corrective removals and transfers
	Territorial wage differentials and bonuses	"Underurbanization" and commuting
	Regional differences in retirement ages and benefits	
	Worker relocation allowances	
	Creation of national and regional organized labour recruitment systems	
	Public exhortation and persuasion campaigns	
	Job assignments for graduates of higher educational and technical institutes	
	Employee transfers	

towns", which, among the centrally planned economies, are particularly characteristic of the Union of Soviet Socialist Republics.[14]

Of secondary, but growing importance is a range of incentive measures directed towards individuals. Included are investments in various types of social overhead capital projects, especially housing. Investment in housing as a migration inducement has increased in recent years as the significance of housing availability in migration decision-making has become more widely recognized.[15] Regional differentials in wages and pension benefits are employed overtly in the Soviet Union.[16] In the other centrally planned economies, sharp wage differentials exist according to occupation; and because many occupational groups are regionally concentrated, regional wage differences also occur, if unintentionally. Lastly, information and propaganda measures are designed to influence migration and settlement patterns. Organized labour recruitment systems currently exist in all the centrally planned economies here discussed.

In analysing the disincentives, some caution should be exercised because difficulties have been experienced in enforcing some of these measures.[17] The spatially selective bans on new or expanded industrial growth are growing in importance in these countries and are employed most frequently in Hungary and in the USSR and, to a lesser degree, in Poland. An even stronger control measure is the actual removal of existing enterprises to control growth, as has occurred at Budapest where, between 1958 and 1970, industrial plants employing 20,000 workers were removed and

[14] New towns in the Union of Soviet Socialist Republics are discussed in Jack A. Underhill, *Soviet New Towns: Housing and National Urban Growth Policy* (Washington, D.C., United States Department of Housing and Urban Development, 1976); and O. A. Konstantinov, "Role of new towns in the development of settlement systems in the U.S.S.R.", *Geographia Polonica*, vol. 37 (1977), pp. 115–120.

[15] The role of housing in migration is discussed in G. Bendemann, "Graphische Fortschreibung der Bevolkerungsbewegung und des Wohnungbestandes als Hilfmittel zur möglichst realen Einschätzung der zu erwartenden Bevölkerungsentwicklung", *Petermanns Geographische Mitteilungen*, Jahrgang 113, No. 3 (1969), pp. 194–200; G. Bose, "Entwicklungstendzen der binnenwanderung in der DDR im zeitraum 1953 bis 1970", *Geographische Berichte*, vol. 64/65, Nos. 3–4 (1972), pp. 187–204; R. Ivanova, "Concerning the development of the eastern regions and their manpower supply", *Problems of Economics*, No. 16 (June 1973), p. 5; and V. A. Protsenko, "Problemy upravleniya migratsiey naseleniya Europeyskogo Severa", in USSR Academy of Sciences, Institute of Sociological Investigations, Soviet Sociological Association, *Sotsial'nye Problemy Migratsyia* (Moscow, 1976), pp. 115–125.

[16] See Robert J. Osborn, *Soviet Social Policies: Welfare, Equality, and Community* (Homewood, Illinois, Dorsey Press, 1970).

[17] L. Avdotjin, "Principles of regional settlement in the U.S.S.R.", in Harry Swain, ed., *National Settlement Strategies: East and West* (Laxenburg, Austria, International Institute for Applied Systems Analysis, 1975), p. 8.

relocated elsewhere in Hungary.[18] The rationalization of industry in larger cities, for example, through capital investments stressing labour-saving equipment, is now emphasized in the centrally planned economies as a means of limiting growth in the labour force requirements of large metropolises.[19] The USSR is apparently experimenting with urban "rents"—i.e., charges to industrial enterprises for infrastructure services—differentiated by size of city, in order to reduce the appeal of large cities.[20]

With respect to individually directed disincentives, residence registration and related administrative measures, such as work documents, are measures widely employed in most of the centrally planned economies. Restrictions on in-migration to designated cities usually involve a selective process with special exemptions for certain skills categories and other reasons. Such restrictions have been utilized primarily in Hungary, Poland and the Soviet Union.

A comprehensive population measure employed in the Eastern European centrally planned economies to limit resident population growth in larger cities is that of "underurbanization" combined with commuting. Investments in housing and social infrastructure have been deliberately limited in most cities, permitting diversion of capital to "productive" sectors of the economy.[21] The limitations in housing and services, combined with administrative and legal measures relating to residence, have served to limit growth of resident populations, while the industrial and productive capacity of the cities has continued to grow at a rapid rate. The labour needs of the centres have been met by utilizing the surplus labour concentrated in rural villages and small towns through the mechanism of commutation.[22] Commuting, to a large extent, thereby becomes a substitute for migration.

[18] Cited by G. Enyedi, "Development regions on the great Hungarian plain", in A. F. Burghardt, ed., *Development Regions in the Soviet Union, Eastern Europe and Canada* (New York, Praeger, 1975), p. 67; and Z. Tatai, "The selective industrialization and the removal of factories to the country from Budapest as an economic policy influencing the growth of agglomeration", paper prepared for the Hungarian-United States Seminar on Geographical Characteristics of Urban Development, Budapest, 1975, p. 36 (mimeographed). The removal and relocation of factories may also occur as a response to areal patterns of labour availability, as was done in Czechoslovakia, where 340 factories were relocated from Bohemia to Slovakia. F. E. I. Hamilton, "Changes in the geography of East Europe since 1940", *Tijdschrift voor Economische en Sociale Geografie*, vol. 61, No. 5 (September/October 1970), p. 304.

[19] O. A. Kibalchich and V. Yu. Lyubovniy, "Regulating the development of big urban agglomerations in the Soviet Union: experience and problems", *Geographia Polonica*, vol. 37 (1977), pp. 196–197.

[20] O. A. Kibalchich and V. Yu. Lyubovniy, loc. cit., p. 195. But a Polish author suggests that the centrally planned economies of Eastern Europe have yet to develop an adequate economic mechanism to replace land rent in market economies. R. Karlowicz, "Mechanism for controlling the development of urban agglomerations", *Geographia Polonica*, vol. 37 (1977), p. 173.

[21] Gur Ofer, "Economizing on urbanization in socialist countries", in Alan A. Brown and Egon Neuberger, eds., *International Migration: A Comparative Perspective* (New York, Academic Press, 1977), pp. 277–303.

[22] Roland J. Fuchs and George J. Demko, "Commuting and urbanization in socialist countries of Europe", *Bulletin*, Association for Comparative Economic Studies, vol. 19, No. 1 (1977), pp. 21–38.

The practice of assigning graduates of universities and technical institutes to their initial post for several years permits planners to direct specialists to localities requiring personnel with special skills and away from centres considered to have adequate numbers of such personnel or under growth controls. Work assignments and job transfers can therefore be employed either to encourage growth or to control growth, as required in specific locales.

C. Policy instruments in developed market economies[23]

Major policy instruments that have been employed in the developed market or mixed economies of Western Europe and Northern America, and in Australia, are summarized in table 4.[24] Most prominent are the numerous incentives that have been directed towards employing organizations. Commonly, special promotional or co-ordinating agencies are established for areas targeted for growth and development. The primary mechanisms relied upon in the efforts to manipulate population distribution and redistribution in these countries are the various economic measures designed to entice employing organizations to invest (and thereby create jobs) in desired areas. These measures include an array of grants, loans, tax rebates, incentives and various types of subsidies intended to overcome the perceived disadvantages of problem areas targeted for population growth or stabilization. In addition to such economic incentives made directly to the employing organization, other measures intended to increase the attractiveness of areas are also employed. Such measures include land development projects, public investment in industrial infrastructure (often in the form of industrial estates and new towns), transport facilities and subsidies, technical assistance programmes, and government procurement programmes providing preferential treatment for designated areas. Moral suasion directed towards organizational decision-makers may be attempted on a sporadic or even a permanent basis.

Incentives oriented towards individuals and families are far fewer and have involved objectives requiring less investment than measures directed towards organizations. Excluding limited relocation grants and housing loans, relatively few financial incentives are extended directly to individuals.[25] The individual-

[23] Excluding Japan and New Zealand.

[24] Particularly useful sources in identifying instruments in the developed market economies are J. L. Sundquist, op. cit.; Organisation for Economic Co-operation and Development, op. cit.; Organisation for Economic Co-operation and Development, *Regional Problems and Policies in OECD Countries* (Paris, 1976); L. S. Bourne, *Urban Systems: Strategies for Regulation (A Comparison of Policies in Britain, Sweden, Australia, and Canada)* (Oxford, Clarendon Press, 1975); R. J. Pryor, "Methods of analyzing population redistribution problems"; and Terence Bendixson, ed., *The Management of Urban Growth* (Paris, Organisation for Economic Co-operation and Development, 1977).

[25] Employment or labour-cost subsidies, a form of wage subsidy, are paid to the employing organization to stimulate job creation and hiring. Niles M. Hansen, "Preliminary overview", in Niles M. Hansen, ed., *Public Policy and Regional Economic Development: The Experience of Nine Western Countries* (Cambridge, Massachusetts, Ballinger Press, 1974), pp. 25–26.

TABLE 4. POPULATION REDISTRIBUTION POLICY MEASURES EMPLOYED IN DEVELOPED MARKET ECONOMIES[a]

Directed towards	*Policy emphasis*	
	Positive/incentives	*Negative/disincentives*
Employing organization..	Special promotional and co-ordinating agencies Public infrastructure development for industry, including new towns and industrial parks Grants and loans for industrial development Tax incentives, including special depreciation allowances for industrial development Tax rebates for industrial relocation Subsidies for relocation of service (tertiary) industries and activities Land expropriation and reclamation Technical assistance programmes Employment or labour-cost subsidies Transportation adjustments and subsidies Preferential government procurement policies	Permits and related controls on new industrial plant construction Building construction permits Tax or other penalities for investments in congested areas Rationing or other restrictions on building materials Dispersal and relocation of government, industries, offices and agencies Zoning restrictions
Individuals and families..	Job training and human resource programmes Relocation and settling-in grants Social infrastructure investments (hospitals, universities and cultural services) Housing benefits (including public housing and loans for private housing) Physical planning and environmental amenity improvement programme	Imposition on metropolitan residents of full costs of water and sewerage utilities, and other services Restrictive zoning practices Discriminatory treatment of non-residents, i.e., local government employment, education etc.
	In-migration restricted to designated locations	

[a] Excluding Japan and New Zealand.

directed incentives instead tend to be indirect and include such measures as job training and other human resource development programmes, public investment in social and cultural forms of infrastructure, and physical planning and environmental amenity improvements.

Disincentives, designed to limit population growth in a specific locale, in general are less common—and often less well enforced—than incentives. Those directed towards employing organizations are usually not outright legal bans on development in specified locales (although such bans may occur), but tend rather to be permits or similar controls limiting the extent of such development and taxes or other financial penalties designed to discourage further development in areas perceived as "congested". A potentially strong disincentive, more often proclaimed than implemented, is the relocation and dispersal of government offices and agencies to regional centres outside the core area of the major metropolis.

The disincentives directed towards individuals are few and mild; even when promulgated they may prove legally or administratively unenforceable. Included in such individual-directed disincentives are special utility or tax surcharges for residence in congested areas, zoning practices designed to limit population growth and discriminatory treatment of non-residents (or more properly new residents) to discourage in-migration. The restriction of in-migrants to designated locations is simultaneously a measure designed to control growth of certain centres and to stimulate growth in the designated locations.

D. COMPARISON OF POLICY INSTRUMENTS IN DEVELOPED MARKET ECONOMIES AND IN DEVELOPED CENTRALLY PLANNED ECONOMIES

Table 5 summarizes the essential similarities and differences between the policy instruments employed in the developed market economies[26] and those in the

[26] Excluding Japan and New Zealand.

TABLE 5. COMPARISON OF MAJOR POPULATION REDISTRIBUTION MEASURES IN DEVELOPED MARKET ECONOMIES[a] AND IN CENTRALLY PLANNED ECONOMIES

	Policy emphasis	
Directed towards	*Positive/incentives*	*Negative/disincentives*
Employing organization	Both groups employ industrial infrastructure investments and transport rate adjustments. Centrally planned economies emphasize job creation through direct investment in state industries and non-industrial establishments. Market economies[a] rely primarily upon such indirect incentives as grants, tax rebates and other financial incentives to private organizations.	Centrally planned economies employ such direct measures as bans on new construction, or expansion of existing industries and even the closing or removal of plants. Market economies[a] emphasize less direct disincentives: permits; licenses; tax surcharges.
Individuals and families	Both groups employ social infrastructure investments (education, cultural facilities and housing) as primary incentives. Both groups use state employment or recruitment agencies to disseminate job information. Both groups employ job training programmes and relocation grants. Centrally planned economies rely heavily upon public housing provision and assignment. Centrally planned economies may employ mass exhortation and persuasion; and in the USSR, regional wage differentials.	In market economies,[a] limited to tax disincentives, zoning, and discriminatory hiring favouring residents In centrally planned economies, administrative and legal measures may be employed, including residence permits. Also, comprehensive policies of "underurbanization" and commuting may be followed.

[a] Excluding Japan and New Zealand.

developed centrally planned economies. Considerable similarity exists in the measures employed in the two groups, perhaps more than is evident because table 5 necessarily emphasizes differences. The similarities derive from the fact, stated earlier, that in both developed market economies and developed centrally planned economies population redistribution policies are embodied in the matrix of national and regional economic development planning. This structure results in an emphasis on economic measures as the primary policy instruments. If one may generalize, both groups place their basic reliance on job-creating capital investments as the major means of stimulating population in desired areas. Economic incentives under this category, directed towards the employing organizations, dominate the list of measures employed in both groups of countries and take precedence over social, administrative and legal measures, as well as other economic measures, including incentives directed towards individuals; and disincentives, whether intended for organizations or individuals.

However, although this general similarity in approach exists, there are also very significant differences in detail which derive from the substantial differences in the economic and political systems involved. The Eastern European centrally planned economies, with direct control over the greater part of their economies, are able to intervene much more directly in the population redistribution process than are the developed market economies, in which the publicly owned sector is relatively small.

With respect to incentives directed towards employee organizations both groups share certain approaches, including public infrastructure investments and transport rate adjustments. The major distinction is between the reliance on job creation through direct investments in State-owned industries and enterprises in the developed centrally planned economies, and the emphasis in the developed market economies on less direct measures, such as grants, loans, tax benefits and incentives designed to induce private organizations to invest in favoured areas.

With respect to incentives directed towards individuals and families, both groups employ investment in social infrastructure to attract and retain migrants. Similarly, both groups use state employment and recruitment agencies to provide information on employment opportunities to potential migrants and to aid in worker resettlement. However, the developed centrally planned economies, with a much greater proportion of housing in the public sector, are again able to

intervene more directly through housing construction, assignments and provision, while the developed market economies must generally depend upon more limited public housing programmes supplemented by indirect incentives, such as housing loans or subsidies. In the category of incentives directed towards the individual, the centrally planned economies employ such measures as exhortation and, in the Soviet Union, regional wage differentials, neither of which have precise equivalents in the policies of developed market economies.[27]

In examining disincentives directed towards organizations, note is again taken that the developed centrally planned economies intervene directly through outright bans of new construction or expansion, and even the shutting-down or removal of employing enterprises, which is in contrast to the preference in developed market economies to rely upon less direct disincentives, e.g., systems of permits, licenses and tax penalties.

Perhaps the greatest contrast exists in the case of disincentives directed towards individuals. In the developed market economies, these disincentives are fairly mild, indirect measures, such as tax penalties, land-use zoning and discriminatory hiring practices. The centrally planned economies, however, may employ administrative and legal controls, such as residence permits and bans on in-migration. Furthermore, the centrally planned economies, unlike the market economies, may employ comprehensive policies fostering underurbanization, with commuting and other forms of circulation substituting for migration.

E. Policy instruments in developing countries

The major policy instruments employed in the developing countries are listed in table 6.[28] Because of the very considerable number of countries included and the great range of political and economic systems, the listing is of necessity selective and somewhat abstracted. As individual developing countries may maintain close economic, educational, scientific or cultural ties with the countries surveyed in the previous sections, the listing reveals shared characteristics with those for the market economies and centrally planned economies.

These influences are particularly evident in the case of incentives directed towards employing organizations. Various developing countries—e.g., Algeria, China and Cuba, employ direct measures, such as State investment in State-owned enterprises, industrial infrastructure investments and subsidies of the type found in the Eastern European centrally planned economies. The majority, however, employ indirect measures of the type commonly found in market economies, intended to induce private investment, particularly in the industrial sector, in desired locations. Included here are such measures as government grants, loans, rebates and tax incentives.

Commonly found incentives directed towards individuals include many employed in the developed countries: housing programmes, investments in social infrastructure (education, health and cultural facilities), and job training and human resource development programmes. Relocation grants are more commonly found in connection with land colonization schemes and dam resettlement projects than with industrial or area development programmes, as in the developed countries.

The most distinctive feature of individual incentives in the developing countries is the very considerable number directed towards those resident or engaged in the rural sector. Land colonization and settlement schemes are widespread in Africa, Asia and Latin America; although increased agricultural production is often the major goal, such measures usually have a strong population redistribution goal as well. Many measures, comprising in effect rural development schemes, also have as an objective the provision of increased employment opportunities in rural areas, with the purpose of retaining rural populations *in situ*. These include such measures as rural public works programmes, land reform, rural credit programmes, development of agricultural extension services, encouragement of labour-intensive technologies, expansion of rural marketing structures, rural price and income policies and rural welfare programmes. "Villagization" schemes, designed to retain rural residents through development of communal living and services, are also found in a number of developing countries; among the more prominent examples are those in Cuba and the Ujamaa scheme in the United Republic of Tanzania.

The range of disincentives directed towards employing organizations is similar to those found in developed countries: the use of permits and other controls to limit expansion or construction of industry

[27] Regionally based cost-of-living allowances or nationally or regionally uniform union wage scales or minimum wage standards, however, may have indirect, if unintended, effects on population distribution in market economies.

[28] Useful reviews of the population redistribution policy instruments in the developing countries include: Sally Evans Findley, *Planning for Internal Migration: A Review of the Issues and Policies in Developing Countries*, International Statistical Programs Center Research Document, No. 4 (Washington, D.C., United States Bureau of the Census, 1977), chap. 6; Aderanti Adepoju, "Population redistribution in tropical Africa: a review of government policies"; and K. E. Vaidyanathan, "Population redistribution policies: an overview of African examples", papers prepared for the International Geographical Union Symposium on Population Redistribution in Africa, Zaria, Nigeria, 25–31 July 1978; R. J. Pryor, "Population redistribution and development planning in South East Asia; Alan B. Simmons, "Slowing metropolitan city growth in Asia: policies, programs, and results", *Population and Development Review*, vol. 5, No. 1 (March 1979), pp. 87–104; Jorge E. Hardoy, "Urbanization policies and urban reform in Latin America", in Guillermo Geisse and Jorge E. Hardoy, eds., *Regional and Urban Development Policies: A Latin American Perspective*, Latin American Urban Research Series, vol. 2 (Beverly Hills, California, Sage Publications, 1972), pp. 19–44; Maruja Acosta and Jorge E. Hardoy, "Urbanization policies in revolutionary Cuba", in G. Geisse and J. E. Hardoy, op. cit., pp. 167–177; and Ramiro Cardona, *Development Strategies and Spatial Distribution Policies in Latin American Population* (Colombia, Corporación Centro Regional de Población, 1978).

TABLE 6. POPULATION REDISTRIBUTION POLICY INSTRUMENTS IN DEVELOPING COUNTRIES

Directed towards	*Policy emphasis*	
	Positive/incentives	*Negative/disincentives*
Employing organizations	Direct state investment in industrial and non-industrial enterprises	Use of permits and controls to limit new construction or expansion of enterprises in selected areas
	Industrial and urban infrastructure investment, including industrial estates, new towns and free ports	Tax or other financial disincentives to limit construction or expansion
	Transportation and utility subsidies	Bans on government investment or construction in selected areas
	Grants, loans, rebates and tax incentives	Political or administrative decentralization, including dispersal of agencies from capital and primate cities
	Regional and urban co-ordinating agencies	
	Promotion of labour-intensive industrial technologies	
Individuals and families	Housing, including self-help squatter settlement programmes	Land-use zoning
	Social infrastructure, including medical, educational and cultural facilities	Areally differentiated tax disincentives and user charges
	Job training and human resource development	Discriminatory access to jobs, education and services for non-residents
	Rural infrastructure, including transportation and utilities	Residence registration and related permits
	Rural public works programmes	Administrative and legal controls on migration to closed cities or areas
	Land reform	Compulsory resettlement of rural residents
	Land colonization and settlement	Slum clearance and squatter resettlement
	Relocation and settling-in grants	Urban "rustication" programmes (including locally issued ration cards and rural work assignments)
	Rural credit programmes	Family planning and fertility control programmes directed towards areas of relatively high fertility
	Agricultural extension services	Restriction on residence of in-migrants
	Rural marketing services	Restrictions on occupations in designated areas
	Rural price and income policies	
	Development of rural labour-intensive technologies	
	Employment agencies and information services	

in designated cities or areas; the imposition of tax or other financial penalties to deter such construction; the dispersal of government agencies from primate cities (e.g., Dar-es-Salaam); and at the local level, land-use controls to limit development.

Far more extensive is the range of disincentives directed towards individuals. The range is broad indeed and includes not only the relatively mild measures of the market economies and the more rigorous measures found in some centrally planned economies, but compulsory measures not generally found in the developed countries. The spectrum therefore includes land-use zoning, residence registration, tax disincentives and user-charges (e.g., at Seoul); discriminatory access to jobs, education and services (occasionally even based on the size of families, e.g., in Singapore); and restrictions on occupations (e.g., vendors) permitted in designated areas. As in the centrally planned economies, administrative and legal measures may be employed in the effort to limit in-migration to "closed cities" (e.g., Jakarta). Extending beyond this level, one also finds examples of compulsory resettlement of rural residents (nomads and sedentary), indirect resettlement of urban residents by slum and squatter settlement clearance programmes; and comprehensive, direct "rustication" programmes undertaken to relocate urban residents to rural areas and centres, as in China.[29]

Although it does not serve to relocate people directly, a measure that should be considered a population redistribution measure is family planning or fertility control directed towards high-fertility areas; because of the often sharp differences in fertility areally within developing countries, such measures may

[29] The rustication programme in China is described in Thomas P. Bernstein, *Up to the Mountains and Down to the Villages: The Transfer of Youth from Urban to Rural China* (New Haven, Connecticut, Yale University Press, 1977).

have the result of changing areal rates of growth through levelling of fertility rates. Restrictions on the residence of immigrants or other subgroups of the population, which may be implemented for other purposes, are also significant population redistribution measures.

F. Comparison of major population redistribution measures in developed market and centrally planned economies and in developing countries

The major similarities and differences between the population redistribution instruments of developed and developing countries are summarized in Table 7. The similarities are quite evident in the case of both incentives and disincentives directed towards employing organizations. Developing countries with market economies tend to employ incentive and disincentive measures resembling those of the developed market economies, while developing countries with centrally planned economies use incentive and disincentive measures of the types employed in the developed centrally planned economies. Thus, the developing market economies rely primarily upon indirect financial and tax incentives to induce private investment and job creation in desired locales. Similarly, they rely upon tax and financial penalties, plus permits

Table 7. Comparison of major population redistribution measures employed in developed market and centrally planned economies and in developing countries

	Policy emphasis	
Directed towards	*Positive/incentives*	*Negative/disincentives*
Employing organization	Developing countries with centrally planned economies resemble developed countries with centrally planned economies in emphasizing direct investment in State-owned enterprises. Developing countries with market economies resemble developed countries with market economies in relying primarily upon indirect financial and tax incentives to private organizations. Developing countries, as do developed countries, generally employ public infrastructure investments, including new towns and free ports, to encourage urban and industrial development. Developing countries differ from developed countries in stressing rural infrastructure investment and development of labour-intensive technology.	Developing countries with market economies emphasize tax and financial penalties, permits and controls (including land use). Developed countries with centrally planned economies may use more direct measures, including limits on investment and bans on construction.
Individuals and families	Developing countries, as do developed countries, rely heavily upon social infrastructure investments (education, housing, health and cultural facilities), as well as upon job training and human-resource development. Developing countries, in contrast to developed countries, place particular stress on rural-based measures: land reform; land colonization programmes; rural credit; rural welfare; rural marketing programmes; rural public works programmes.	Developing countries as a group use a wider range of disincentives than developed countries. They employ: (*a*) Tax disincentives, zoning, and discriminatory programmes used in developed countries with market economies; (*b*) Various administrative and legal measures commonly found in developed countries with centrally planned economies. In addition they may employ: (*a*) Compulsory rural resettlement schemes and urban "rustication" programmes; (*b*) Family planning programmes, directed to high-fertility areas, particularly rural areas.

and zoning contracts, to discourage investment and job creation in areas perceived as undesirable for further growth. The developing centrally planned economies generally employ, as incentives, direct investment and hence job creation in desired locations; and, as disincentives, limits on state investment and construction in particular locales.

Developing countries, regardless of the type of economy, emulate developed countries in their heavy emphasis on infrastructure investment to induce economic growth and eventually population growth through migration gains in selected locations. Developing countries, as may be expected in view of the greater size of their rural population, differ markedly from developed countries, however, in the relatively greater emphasis placed on infrastructure improvements in rural areas. This difference follows in part from attempts to promote equity by reducing acute rural/urban differences in economic welfare and in part from conscious policies to "hold" rural population in migrant source areas.

The differences between developing and developed countries are more apparent when one examines the incentives and disincentives directed towards individuals and families. Turning first to the incentives, developing countries, as do the developed countries, depend heavily upon social investments—such as education, including job training and human resource development, housing and health—as a population redistribution measure. However, a major difference between the developing and developed countries is the greater emphasis placed by the former on rurally focused incentives, in particular, measures designed to increase job opportunities, income or welfare in rural areas. These measures include land reform, land colonization schemes, rural credit programmes, rural marketing schemes, rural price and income policies, rural public works programmes etc. Again, these measures often comprise parts of equity-based programmes designed to increase rural levels of living in relation to urban levels, as well as to "hold" rural populations by reducing the attractiveness of migration for rural residents.

The disincentives directed towards individuals and families, designed to reduce population growth in specific centres or regions, also exhibit major differences from the developed countries. The developing countries, as a group, employ a wider range of disincentives directed towards individuals and families than are found in the developed countries, although there is also substantial overlap. Tax disincentives, zoning and measures discriminating against particular groups may be employed by the developing market economies, as they are in the developed countries. The various administrative and legal measures commonly found in the developed countries with centrally planned economies are also used by many developing countries (although the policy of deliberately substituting commuting or other forms of circulation for migration seems to have been overlooked). A number of the developing countries, moreover, have adopted even more authoritarian measures, including compulsory resettlement of rural and urban populations. Lastly, many developing countries, unlike developed countries, have adopted family planning programmes directed towards high-fertility areas, which indirectly, and over a long time period, may address the population distribution problems caused by differential fertility rates.

That the developing and developed countries exhibit considerable similarities in individual and sets of incentive and disincentive measures is not surprising in view of the fact that many of these measures derive from national and regional development planning programmes. Such programmes in the developing countries are often heavily influenced by models of the developed countries, whether market or centrally planned economies, from which they are adopted. A major difference from the developed countries is the greater stress on measures specifically directed towards rural areas and populations, a natural reflection of the much larger rural populations in developing countries and the perceived need simultaneously to improve their welfare and to reduce rural "push" factors leading to migration. A second major difference, the greater range of disincentives directed towards individuals and families, including many compulsory measures, is an outgrowth of the more acute distribution and redistribution problems in developing countries and the perceived urgency in some countries to attack these problems by whatever measures hold promise of immediate or short-term relief.

G. Policy instruments and the redistribution mechanism

In this section of the paper, the general patterns of relationship between population redistribution instruments and the redistribution mechanism are examined. Ideally, one would hope for a high degree of correspondence, with policy instruments carefully matched to desirable intervention points in the redistribution process. For a number of reasons, such an expectation is unlikely to be achieved in practice. First, the population redistribution measures itemized above have usually been devised as instruments auxiliary to national and regional economic planning rather than in response to existing knowledge of the redistribution mechanism. Furthermore, they have often been formulated in an intuitive or pragmatic manner, rather than fashioned in accordance with empirical and theoretical knowledge of redistribution and migration processes.

Secondly, knowledge of the redistribution mechanism is itself quite incomplete. A full accounting of the redistribution process would require an understanding of the interaction within a developmental context of internal migration, areally differentiated rates of natural increase and international migration; and their relationships to the pre-existing distribution

of population and the evolving spatial socio-economic structure of a country. How far away such an understanding of such a complex mechanism is need not be belaboured.

Even if one focuses on a more limited component of the redistribution mechanism, internal migration—which is generally the most important policy intervention—there is still considerably less knowledge than one should have in order to design effective intervention measures. The state of the knowledge and the deficiencies in understanding are discussed in a number of recent reviews.[30] Among the failings in the body of literature on migration, noted by reviewers, are the concentration on rural-urban migration at the expense of other forms of migration and mobility, the tendency to have research design and direction dictated by the more easily available data rather than by significant gaps in knowledge, a lack of comparability in approach and therefore of accumulations of findings, a reliance on static observations and proximate causes, a focus on individual migrants and a neglect of the impact on source and destination areas, a failure to uncover the interdependencies between causes and consequences of migration; and lastly, but not least from the standpoint of the present authors, a neglect of the study of the impacts of policies and programmes designed to influence migration.

Such deficiencies notwithstanding, a broad consensus exists on the major determinants of migration in the less developed countries:

(*a*) Economic incentives, especially increased employment and income opportunities, appear to be the major determinant accounting typically for over 50 per cent of the variation in migration rates between geographical areas;[31]

(*b*) Non-economic incentives, including improved housing and public services (especially education and medical services), are viewed as a major secondary determinant, the exact strength of which remains unknown because of difficulties in quantifying the variables involved;

(*c*) Distance, it is agreed, has a substantial deterring effect beyond the financial costs involved in moving greater distances;

(*d*) Contacts, information and the presence of friends and relatives are also important, especially in explaining migration direction and streams, and migrations over greater distances than expected;[32]

(*e*) Migrants are not typical of a population but reveal selectivity in the form of age, sex, education and income biases. Migrants are generally younger and better educated, and have higher incomes than non-migrants. Sex selectivity varies by culture and stage of development.

The various "determinants", of course, are not mutually exclusive; some of the "non-economic" incentives relate to amenities with current (e.g., housing) or future (e.g., education) economic value; distance and contacts are highly interrelated; migrant characteristics may overlap with all the other determinants. Nevertheless, these major categories of determinants provide a useful framework for examining the relationship between commonly employed redistribution incentives and disincentives, on the one hand, and what might be considered intervention points in the redistribution process.

The relationships between incentives and disincentives employed in the developing countries and migration determinants are summarized in table 8. (The other components of the redistribution mechanism—differential rates of natural increase and international migration—have been omitted because only three measures bear directly on them: family planning programmes to address differential fertility; health programmes to deal with differential mortality; and residential restrictions directed to immigrants). In cases where the relationship between a policy instrument and a migration determinant appears indirect, rather than direct, it is so indicated although the judgement is, of necessity, somewhat arbitrary.

One may ask what generalizations can be drawn from this table. First, more redistribution measures are related to that category of migration determinant labelled "economic" (employment and income) than to any other single category. Both for incentives and for disincentives directed towards employing organizations, they are overwhelmingly related, whether directly or indirectly, to this category. Approximately half of the incentives and somewhat less than half of the disincentives directed towards individuals also fall in this category.

On the surface, it would appear that population redistribution measures overall are weighted towards the most powerful group of migration determinants—that of economic determinants—and therefore are in accord with what might be considered a desirable pattern based on the knowledge of migration behaviour. However, in reality, the situation is not so simple nor conducive to an optimistic interpretation. Many of the redistribution measures considered economic determinants are development and planning measures which operate only indirectly upon employment and

[30] Among the more useful are Lorene Y. L. Yap, "Internal migration in less developed countries: a survey of the literature", World Bank Staff Working Paper, No. 215, Washington, D.C., September 1975; A. Simmons, S. Diaz-Briquets and A. A. Laquian, op. cit.; J. du Guerny and C. Horgan, "Factors affecting migration and implications for population redistribution policies and programmes", paper prepared for the FAO/UNFPA/ASEAN Technical Workshop on Migration in Relation to Development in ASEAN Countries, Bangkok, Thailand, 21–25 November 1977; and Raúl Urzúa, "Internal migration in developing countries: a discussion from a population policy viewpoint", working paper IRG/45 prepared for the First Workshop on Research Priorities for Population Policy, organized by the International Review Group of Social Science Research on Population and Development, and co-sponsored by Marga Institute, Sri Lanka Institute for Population Studies; Colombo, 26–28 April 1978.

[31] L. Y. L. Yap, op. cit., p. 2.

[32] See Ayşe Gedik, "A causal analysis of the destination choice of village-to-province center migrants in Turkey, 1965–1970", unpublished doctoral dissertation, Seattle, University of Washington, 1977.

TABLE 8. RELATIONSHIPS BETWEEN POPULATION REDISTRIBUTION INSTRUMENTS AND MIGRATION DETERMINANTS

Policy instrument	*Migration determinant*				
	Economic (employment and income)	*Non-economic (housing, medical, education, public utilities)*	*Distance deterrence*	*Contacts and information*	*Migrant selectivity (age, sex, education, income)*
Incentives directed towards employing organizations					
State investment in enterprises	Direct				
Urban and industrial infrastructure investment	Indirect	Direct			
Transportation and utility subsidies	Indirect	Direct	Indirect	Indirect	
Grants, loans, rebates and tax incentives	Indirect				
Regional and urban coordinating agencies	Indirect				
Promotion of labour-intensive technology	Direct				
Disincentives directed towards employing organizations					
Use of permits and controls to limit new construction or expansion of enterprise in selected areas	Indirect				
Tax or other financial disincentives or construction and expansion	Indirect				
Bans on government investment in employing organizations in selected areas	Direct				
Political or administrative decentralization and agency dispersal	Direct				
Incentives directed towards individuals and families					
Housing measures		Direct			Sometimes direct
Social infrastructure		Direct			
Job training and human resource development		Direct		Sometimes direct	Sometimes direct
Rural infrastructure		Direct			
Rural public works programmes	Direct				
Land reform	Direct				
Land colonization	Direct				Sometimes direct
Relocation grants			Direct		
Rural credit programmes	Indirect				
Agricultural extension services	Indirect				
Rural marketing services	Direct				
Rural price and incomes policies	Direct				
Development of rural labour-intensive technology	Direct				
Employment agencies and information services	Direct			Direct	Sometimes direct

TABLE 8. (*continued*)

Policy instrument	Migration determinant: Economic (employment and income)	Non-economic (housing, medical, education, public utilities)	Distance deterrence	Contacts and information	Migrant selectivity (age, sex, education, income)
Disincentives directed towards individuals and families					
Land-use zoning		Indirect			
Tax disincentives and special user charges ..	Direct				
Discriminatory access to jobs	Direct				
Discriminatory access to services		Direct			
Residence registration and residence permits		Direct			
Work permits	Direct				
Administrative and legal controls on migration .	Indirect	Direct			
Compulsory resettlement of rural residents	Direct	Direct			
Slum clearance and squatter resettlement		Direct			
Urban "rustication" measures	Direct	Direct			May be direct

income and are likely, as a result, to have a weakened impact on migration behaviour. Also, in many countries, such measures, for political or other reasons, are likely to be simultaneously implemented in regions and centres already considered congested, as well as in the areas in which growth is to be stimulated, thereby cancelling out potential redistribution effects. Lastly, it must be kept in mind that what is described here is the range of commonly found measures over a large number of countries; in any particular country the actual mix of measures will be quite different and is unlikely to show the same distribution by determinants found for the group as a whole.

The second leading category of incentives and disincentives is that related to "non-economic" migration determinants, such as housing, medical services, education and other public services. This finding is not surprising because many of the measures are those commonly employed in development and regional planning to bring about regional equity. Measures related to the non-economic migration determinant category therefore are most commonly found among the incentives directed towards both employing organizations and individuals in developing countries. As the precise importance of the non-economic determinants in influencing migration behaviour is still a matter of debate, the efficacy of such measures also remains very much in question. It is interesting to note that the majority of disincentives directed towards individuals are in this category, which perhaps reflects a tendency of Governments, for political reasons, to prefer weaker, indirect measures for discouraging migration or perhaps reveals an unawareness of the more powerful effect of disincentives related to economic determinants.

The remaining major determinants of migration are notably neglected by current incentives and disincentives employed in the developing (and the developed) countries. Distance deterrence is but occasionally the objective of relocation grants and travel subsidies. The important determinant of contacts and information is usually overlooked or only weakly attacked by fledgling propaganda or employment information programmes. Despite known biases in migrant characteristics, most of the policy measures employed tend to be directed towards populations at large, thereby forgoing the possibility of using migrant selectivity as a positive force through programmes directed towards the most susceptible population subgroups.[33]

SUMMARY AND CONCLUSIONS

This concluding section summarizes the major findings of this survey of population redistribution instruments and their relation to the population redistribution mechanism, and includes possible implications for a more effective incorporation of population redistribution policies into national development planning:

(*a*) The range of population redistribution measures employed in the developing countries as a group is

[33] Conversely, the characteristics of non-movers are rarely, if ever, the object of policy intervention, even when a national policy goal is retention of population in a given area. This may be because the overwhelming focus of study and attention has been upon the traits of movers and a widespread assumption that those of non-movers are the opposite.

already broad not only from the standpoint of including economic, administrative and legal measures, but from that of incorporating measures found in the developed countries, whether market economies or centrally planned economies. There remains, however, a lack of knowledge about or systematic inventory of these measures—their design, compatibility and effectiveness. A further systematization and comparison of global experiences with these measures is required so that planners in the developing countries may have ready access to information concerning the range of measures already employed and the experience in implementing them. Individual countries will necessarily wish to design programmes and instrument packages specific to their own needs, objectives and societal and development context. However, in the absence of a systematic review and evaluation of previous experience to draw upon there is likely to result a considerable waste of resources on the part of countries that can ill afford it;

(*b*) The majority of instruments employed previously—whether in developed or developing countries, or in market or centrally planned economies—are auxiliary to national and regional economic development planning. Population redistribution measures may therefore play a dual role as development measures and redistribution investments. Population redistribution measures are usually directed towards equity rather than efficiency goals and may therefore be overriden by economic development measures designed to foster aggregate economic growth and efficiency. Growth-oriented and efficiency-oriented development measures will have unintended spatial demographic impacts and in effect serve as "hidden" redistribution policies. A strong need therefore exists "for systematic studies that highlight the existence of such policies, attempt to measure their (unintended) effects on population redistribution, and propose changes that would bring government programs more in line with stated government policy"[34] concerning population distribution;

(*c*) The origins and locus of implementation of the individual population redistribution measures employed in any country are likely to reside in various ministries and agencies, and hierarchically at various levels of the Government. There is a clear need for the development of co-ordinating units to deal with this problem of integration and also that mentioned above concerning the compatibility of "hidden" or implicit policies with explicit policies. Because the majority of instruments are economic development measures, it may be logical in many cases to lodge such a co-ordinating unit in the major ministry or agency concerned with development planning. Development of such institutional capability, whatever its locus, will require the formulation of special training programmes for the personnel to be involved in population distribution planning. Such personnel should have a background in theories and policies related to development planning as well as population distribution and redistribution. As first step towards rapid development of a cadre of trained personnel it may be desirable to concentrate on special short-term programmes for persons already experienced and involved in development planning, providing them with training in population distribution and redistribution planning;

(*d*) An examination of current, widely employed instruments in the light of known migration determinants raises questions for further research and also a challenge to develop additional instruments and programmes more closely in accord with the redistribution mechanism:

(i) Although a great number of policy instruments are related to economic (i.e., employment and income) determinants, many of these measures are indirect. The efficacy of these indirect measures must be ascertained; it should not be assumed that they necessarily have a strong impact;

(ii) There is a heavy reliance also upon measures of a service and general welfare character related to non-economic determinants. These measures may be so ubiquitously applied over a country as to negate any desired spatial demographic impact. Also, the cost-effectiveness of these measures as population redistribution instruments remains to be determined;

(iii) The effect of distance deterrence on migration is largely neglected by current instruments, except for the limited programmes of relocation grants. A less costly approach may be to direct redistribution programmes geographically towards likely migrants from areas near the proposed destination area, thereby taking advantage of the distance bias;

(iv) The importance of contacts and information in inducing and directing migration is similarly overlooked in most redistribution measures and in most comprehensive programmes, which suggests that in redistribution programmes greater stress should be placed on information measures, perhaps employing schools as well as media appropriate to the country in question. In the absence of such deliberate information programmes, one might reasonably conclude migration streams will become further biased towards the primate city, which is the prime beneficiary of attention from the public media and is likely to have the greatest existing pool of in-migrants transmitting information informally to friends

[34] Gavin W. Jones, "Social science research on population and development in South-East Asia and East Asia: a review and search for directions", background paper IRG-WI/B.P. 3 prepared for the First Workshop on Research Priorities for Population Policy, organized by the International Review Group of Social Science Research on Population and Development, and co-sponsored by Marga Institute, Sri Lanka Institute for Population Studies; Colombo, 26-28 April 1978.

and relatives still resident in migrant source areas;

(v) Migrant selectivity, which plays a major role in the composition of migrant flows, needs to be taken into account to a greater extent than is currently the case. Instead of being intended for populations at large, programmes and measures should be directed towards subgroups likely to be receptive to moving or staying. This policy requires prior research, specific to each country, on migration behaviour and on the characteristics of stayers and non-stayers for each type of migration and mobility that planners hope to affect;

(vi) Future assessments of redistribution policy instruments must be buttressed by far more thorough evaluations than have been achieved to date. The difficulties in conducting such evaluations, intricate for any public policy measures, are compounded in the case of redistribution instruments by existing inadequacies in the data base, especially in regard to non-permanent migration, the necessity to determine relative cost-effectiveness for an enormously wide range of interacting measures, the need to consider relevant time-horizons for anticipated effects and the problem of areal scales appropriate to individual measures.

Current trends in population redistribution in the developing countries have led to increasing intervention in the redistribution process. However, the current state of knowledge with respect to redistribution measures is still such that policy-makers and planners may inadvertently employ measures that are costly, ineffective or even counterproductive. Remedying the situation will clearly require a concerted and sustained effort on the part of social scientists, development planners, policy-makers and donor agencies.

Part Four

URBAN-ORIENTED POLICIES

VII. A REVIEW AND EVALUATION OF ATTEMPTS TO CONSTRAIN MIGRATION TO SELECTED URBAN CENTRES AND REGIONS

*Alan B. Simmons**

Most developing countries have indicated dissatisfaction with the size and continuing high growth rates of their largest cities.[1] Migration from the countryside and natural population increase in these metropolitan areas have led to an unprecedented rate of population growth and overloaded public services and social infrastructure. The streets are generally congested and noisy, the air and drainage ditches are often polluted, adequate housing is scarce, slums and squatter dwellings abound, sewerage facilities are inadequate; and outlying suburbs may lack water, garbage collection and electricity. The financial resources to solve these problems would take a large part of the national budget and thereby divert resources away from needed development programmes in the countryside and smaller urban centres.

This paper concerns the rather controversial topic of restrictions, regulations, controls, disincentives and other socio-economic measures directed towards slowing and reversing rural-urban migration. Developed market economies use residential zoning regulations and industrial tax incentives extensively for urban and regional planning; the Eastern European centrally planned economies tend to use residence permits, job assignments and housing allocation programmes.[2] Among the developing countries of the world one finds examples of all the preceding constraint mechanisms and many cases of even more coercive measures, such as the forced resettlement of urban squatters. It is not the objective in this paper to condone these measures as drastic but possibly necessary solutions; nor is the objective to condemn them as a threat to freedom and economic efficiency. Rather, the paper documents the varieties of constraints on migration which have been employed in different countries, particularly in developing countries, and assesses their effects on slowing metropolitan growth and on other development goals.

A. Some preliminary questions

A brief summary of the reasons that cities in developing countries are growing so rapidly and the problems resulting from such growth will establish the context for the review of migration constraint policies.

Aspects of urbanization that cause problems

Urban growth patterns vary greatly from one developing country to another. Overall levels of urbanization—that is, the proportion of people who live in towns, small cities and large metropolitan areas—are high in Latin America, moderate in Eastern South Asia and East Asia, and low in other regions of South Asia and Africa.[3] In all developing countries, levels of urbanization rise as levels of national income and industrial production rise. From this point of view there is little to be alarmed about: the currently developing countries appear to be following the pattern established earlier by the now developed countries.

The reason for alarm and concern is not the level of urbanization, but rather its rate and concentration. Compared with the currently developed countries when they experienced accelerated urbanization, urban areas in developing countries are growing at historically unprecedented rates, in part because overall rates of natural population growth are exceedingly high in the urban and rural areas of developing countries. Natural growth (births less deaths) constitutes 60 per cent or more of total urban growth in the developing countries.[4] Of course, migrants contribute significantly to this natural increase, since those who move to cities tend to be young adults with high fertility and low mortality. Current rates of migration to urban areas in developing countries appear to be within the range of rates experienced by developed countries. When migration and the fertility of migrant and "non-migrant" parents are combined, city growth can reach high levels. Although most of the cities in less developed countries are growing in the range of from 4 to 6 per cent each year (doubling the city population every 12–16 years), some cities, including several in Africa, are growing from 10 to 12 per cent each year (doubling the city population every six or seven years). It is this rate of increase which overburdens urban infrastructure.

In the developing countries, urbanization is concentrated in a relatively few urban centres in each

* International Development Research Centre, Ottawa, Canada.

[1] Samuel H. Preston, "Urban growth in developing countries: a demographic reappraisal", *Population and Development Review*, vol. 5, No. 2 (June 1979), p. 195.

[2] Roland J. Fuchs and George J. Demko, "Population distribution policies in developed socialist and Western nations: *Population and Development Review*, vol. 5, No. 3 (September 1979), pp. 439–467.

[3] Population Reference Bureau, *World Population Reference Sheet* (Washington, D.C., 1979).

[4] S. H. Preston, loc. cit., p. 198.

country. Typically, the largest city in a country is many times larger than the second largest. Among the extreme cases, Bangkok is nearly 40 times larger than Chiengmai, the second largest city in Thailand.[5] The social costs of these large "primate" cities and the regional disparities in income associated with their emergence concern planners. Mexico City, for example, now has in excess of 10 million inhabitants, but is still an attractive place for individual investors and migrants seeking to maximize their market and employment opportunities. However, among other problems, Mexico City is running out of water and large areas of the city currently have no water for extensive periods of the year. The cost of bringing in water from new sources is rising to levels that could threaten the national budget.[6] Available water is at lower altitudes, 200 kilometres away and will have to be pumped up—the electricity to pump the required water is estimated at one fifth of the current national electricity production.

Why people continue to move to congested cities

Unskilled migrants in particular have difficulty obtaining employment, food and housing in metropolitan cities. Their continued migration to cities is therefore a paradox. But the answer is simple and has been confirmed by repeated studies: migrants are actually better off economically in the city than in the countryside.[7] Although life is difficult in an urban slum, it is apparently worse in many rural areas. The reasons behind this fact can be explained by an analysis of historical patterns of investment and economic growth. The specific details vary from one country to another, but the following elements are generally held in common:

(*a*) Rapid population growth brought about by lower death rates and agricultural development has led to a large landless class and unemployment in rural areas;

(*b*) Seasonal employment and subsistence agriculture provide exceedingly low levels of income, with the result that rural people tend to drift to urban locations;

(*c*) Urban centres, particularly the largest cities, offer agglomerative economies attracting private investment, public enterprise and government offices. Investment in rural areas and smaller cities is too small to bring about economic growth or attract migrants;

(*d*) Employment in government and modern industry in the metropolitan cities provides workers and professionals with wages;

(*e*) The services demanded by more affluent workers provide the base for a much larger "informal sector" of hawkers, vendors, cabmen, gardeners, maids and other assorted workers. Wages in these occupations are generally low but sufficient to attract rural migrants.

Whether developing countries should attempt to slow metropolitan growth

Currently, no general answer can be given to the question whether developing countries should attempt to slow metropolitan growth. A specific assessment must be made in each country and unique circumstances (such as the water and energy supply implications of continued growth in Mexico City) must be taken into account. In the decision, a key factor is the cost of population distribution programmes. Some of these costs are direct, associated with specific relocation programmes. Others are "opportunity costs" relating to whether slower or dispersed city growth will be economically less efficient and drag down national economic progress. While the debate on this latter issue continues, there is reason to believe that the hierarchical structure of urbanization (that is, the presence or absence of a single "primate city" dominating all other urban areas) has been largely unrelated to economic performance in developing countries. Among developing countries with a growing economy some continue to reveal strong primacy patterns (Mexico, Thailand); others, decreasing primacy (Brazil, Malaysia and the Republic of Korea); and, in general, developed countries have much lower rates of primacy. Apparently, policy-makers can assess specific needs in their countries and modify urban structures accordingly without necessarily restricting economic growth.

B. Constraints as policy tools

Migration constraints include all administrative, social and economic measures designed to force, channel or restrict population movement. Administrative measures include zoning regulations (on housing or industrial location), legal prohibitions on migration and forced resettlement. Social measures include mass exhortation, education and information campaigns to direct migrants. Economic measures include property taxes, rent and land subsidies and infrastructure inputs (highways, electricity etc.) which influence the location of migrants and firms.

Migration constraints should be viewed as "policy

[5] Vinyo Vichit-Vadakan, "Land use policy in Thailand with special reference to the Bangkok Metropolitan area", in John Wong, ed., *The Cities of Asia: A Study of Urban Solutions and Urban Finance* (Singapore, Singapore University Press, 1976), pp. 237–246.

[6] Wayne A. Cornelius, "Introduction", in Wayne A. Cornelius and Robert V. Kemper, eds., *Metropolitan Latin America: The Challenge and the Response*, Latin American Urban Research Series, vol. 6 (Beverly Hills, California, and London, Sage Publications, 1977), p. 10.

[7] For reviews of findings, see Sally Evans Findley, *Planning for Internal Migration: A Review of the Issues and Policies in Developing Countries*, International Statistical Programs Center Research Document, No. 4 (Washington, D.C., United States Bureau of the Census, 1977); Alan Simmons, Sergio Diaz-Briquets and Aprodicio A. Laquian, *Social Change and Internal Migration: A Review of Research Findings from Africa, Asia and Latin America* (Ottawa, International Development Research Centre, 1977); and Michael P. Todaro, *Internal Migration in Developing Countries: A Review of Theory, Evidence, Methodology and Research Priorities* (Geneva, International Labour Office, 1976).

tools". They are not complete policies. Rather, they can be applied selectively to achieve various "policy objectives", such as holding farmers on the land, discouraging migrants from entering select cities, directing population flows towards frontier areas and so on. A complete migration policy would specify both the objectives and the mechanisms.

Constraint mechanisms tend to be controversial primarily because they often emphasize "negative" controls, such as disincentives, prohibitions, bans, fines and penalties intended to direct people away from areas where they currently live or where they would like to live. "Positive" policy tools, in contrast, encourage population movement through incentives, including better housing, working conditions, salaries and so on.

In practice, the distinction between disincentives and incentives is difficult to maintain. The two are often opposite sides of the same coin. Offering subsidized low-cost housing to people who live in location "a", and not subsidizing higher rents in location "b", can be seen either as an incentive to move to "a" or as a disincentive forcing migrants away from "b". It is therefore useful to consider both disincentives and incentives as constraint mechanisms.

Migration policies can be "one-sided" or "two-sided". One-sided policies are those which apply measures in one area only without applying complementary measures in other areas. Two-sided policies are those which apply complementary, co-ordinated constraints to destination and origin areas. Two-sided programmes may be based entirely on administrative measures, such as compulsory job placement and housing assignment programmes co-ordinated in both locations. However, they may also include co-ordinated economic incentives and disincentives.

Table 9 gives a classification of several policies designed to slow metropolitan growth and their associated migration constraint mechanisms. The table shows that some policies are inherently one-sided (e.g., "closed-city" policies) while others are often but not always "two-sided" (e.g., agricultural development and growth-pole strategies). Of course, the alternative destinations emphasized in two-sided strategies may be pursued as economic programmes valuable in their own right, without reference to controlling metropolitan growth.

As table 9 also shows, the complexity of co-ordinating migration constraint mechanisms varies significantly from one policy approach to another. The simplest policies to co-ordinate are those which involve only the metropolitan government (e.g., "closed-city" policy) and require no co-ordination with other levels of government, even though inputs from the latter would serve to strengthen the effort. Dormitory-town and satellite-city policies may be co-ordinated by the city and the provincial or state government where the city is located. Broader national rural development and growth-pole policies are administratively far more complex, as they require co-ordination over at least three levels of government: city; state or provincial; and national.

Next to be considered are examples of the policies designated to slow metropolitan growth and the way in which various constraint mechanisms have been employed in them.

C. Closed-city and anti-accommodation policies

Many municipal governments in developing countries at first reacted to increased migration as if it were an invasion which they had to repel. Towns and cities that had been growing slowly through natural population growth appeared to explode in size overnight when the first waves of migrants arrived. In the process, various municipal zoning regulations, laws and commercial standards were broken. Migrants, for example, squatted on public land.[8] In Latin America, they frequently organized "land invasions" in which several hundred families would creep on to a vacant urban plot at night and quickly erect pre-assembled cardboard and tin shacks.[9] Beggars, vagrants and unemployed were found in increasing numbers on the streets. Land speculators sold tiny, unimproved and unzoned "pirate" lots on the outskirts of town for modest prices. Not surprisingly, the immediate reaction of many local municipal authorities was to crack down on slum-dwellers, vagrants and residents in unorganized suburbs. Bulldozers moved in to crush squatter housing; the military forced relocation; migrants were "bussed" back to their villages; and prohibitions were placed on hawkers and vendors.[10] These repulsions were frequently spontaneous, disorganized and temporary; but in some countries, official "anti-accommodation" and "closed-city" programmes were established on a systematic, continuing basis.

Jakarta

One of the best known attempts to prohibit the entry of migrants to the city is found at Jakarta, the capital of Indonesia. In 1970, the Governor of Jakarta passed a decree whereby migrants to Jakarta were obliged to register with the city government and to deposit a sum equivalent to their return fare to Jakarta.[11] Six months after registration, if migrants could not prove that they

[8] John F. Turner, "Uncontrolled urban settlement: problems and policies", in Gerald Breese, ed., *The City in Newly Developed Countries: Readings on Urbanism and Urbanization* (Englewood Cliffs, New Jersey, Prentice-Hall, 1969), pp. 514–516.

[9] Elsa Usandizaga and A. Eugene Havens, *Tres barrios de invasion: estudio de nivel de vida y actitudes en Barranquilla* (Bogotá, Facultad de sociología de la Universidad Nacional de Colombia/ Ediciones Tercer Mundo, 1966).

[10] See examples cited by William A. Hance, "Controlling city size in Africa", in Centre national de la recherche scientifique, *La croissance urbain en Afrique noire et à Madagascar* (Paris, 1972), vol. 2, pp. 656–657; and Aprodicio A. Laquian, *Slums Are for People: the Barrio Magsaysay Pilot Project in Philippine Urban Community Development* (Honolulu, East-West Center Press, 1971).

[11] Richard Critchfield, "The plight of the cities: Djakarta—the first to close", *Journal of World Business*, vol. 6, No. 4 (1971), pp. 89–94.

TABLE 9. POLICIES DESIGNED TO SLOW METROPOLITAN GROWTH AND ASSOCIATED CONSTRAINT MECHANISMS

Policy objective	*Constraint mechanisms*		*Administration of constraints*
	Applied in the metropolitan area	*Applied in alternative destinations*	
"Closed-city policies"			
To stop migrants from settling in the metropolitan area	Destruction of squatter housing Forced eviction Identity cards and passports Restrictions on investment in housing and industry Pay return trip home Bans on informal sector occupations (street vendors etc.)	None	One-sided policy applied in the metropolitan area. These policies can independently be administered by the municipal governments. Other levels of government may assist.
Dormitory towns and satellite cities			
To relocate migrants and others born in the city to towns in the vicinity, separated from the core by "green belts" and connected to the core by commuter transportation	No subsidies for housing Zoning against new housing Freeze on social services Discouragement of industry through higher taxes and property values Job assignments Housing placement Commuter transport "Green-belt" zones around city	Subsidized housing Zoned for new housing Expanded social services Attraction of industry through tax and relocation incentives Job assignments Housing placements Commuter transport	Two-sided policies applied in the metropolitan area and in alternative destination. Both the municipal governments and the authorities in the district immediately surrounding the city must be involved. The national Government may assist.
Intermediate cities and rural development			
To redirect migrants to alternative destinations which are distant from the city	As given above, but excluding commuter transport Regional and sectoral wage policies	As given above, but excluding commuter transport Regional and sectoral wage policies Infrastructural investments (highways, electricity etc.) In rural programmes, land settlement and colonization with credit and technical assistance	Two-sided policies involving three levels of government: municipal, regional and national. Strong national coordination required.

were employed and domiciled they were given one-way tickets to their places of origin.

While seemingly straightforward, these regulations were extremely difficult to administer. Violators proved too numerous to control. In one night, for example, city officials and police rounded up as many as 13,000 persons who were vagrants and lacked identification cards.[12] Accordingly, they were taken in trucks to their villages of origin. However, they are reported to have returned to Jakarta almost immediately. Some city government officials later admitted that they recognized from the beginning their incapacity effectively to administer the closed-city scheme; however, they had hoped that the policy announcement and the periodic "deportation of migrants would act as a tool to discourage new migrants.[13] An undesirable side-effect of these regulations was petty corruption. Identification cards and other official papers were clandestinely peddled in Jakarta.

[12] Judy B. Williams, "Sadikin closes Jakarta", *Insight*, February 1973, pp. 16–20.

[13] Gerald Krausse, "Economic adjustment of migrants in the city: the Jakarta experience", *International Migration Review*, vol. 13, No. 4 (Spring 1979), p. 49.

More recently, a strategy of "anti-accommodation" policies has been introduced to limit job opportunities of unskilled workers at Jakarta. A highly visible and common job for new migrants from the countryside is *betjak* driving—that is, pedalling a brightly coloured tricycle "taxi" through downtown streets. The *betjak* was previously the main form of urban transportation at Jakarta. In 1971, there were over 126,000 registered *betjaks* in Jakarta, most working two shifts a day, employing up to 240,000 drivers in all, who, with their families, numbered as many as 700,000 or 800,000 people.[14] The government wants to get *betjaks* off the street and as a first step has introduced *betjak*-free zones. All vehicles must be registered and no new *betjaks* can be built. Reports indicate that from 20,000 to 30,000 *betjaks* have already been removed in *betjak*-free zones and that the Master Plan for Jakarta calls for their total elimination by 1980.[15] Over the past several years, the government also attempted to remove unlicensed sidewalk vendors, marginal workers, scavengers and beggars from the city streets. Measures include the confiscation of goods from vendors without licences.

Despite some claims that migration to Jakarta has been drastically reduced, the evidence suggests that the various administrative measures have had only a modest impact. An early account of the experiment noted that "despite registers, control cards, cash deposits and transmigration, the Indonesian capital . . . leaks internal migrants like a sieve".[16] The question, however, is whether it would be growing more rapidly if the "closed-city and anti-accommodation" policies had not been instituted. This may indeed be the case. Unemployment, for example, has increased in surrounding cities, perhaps as a consequence of migrants being deflected away from Jakarta.[17] Also, some statistics show that the number of *betjak* drivers and street vendors in the city has declined, suggesting that people formerly active in these occupations have returned to rural pursuits or migrated elsewhere.[18] As yet, however, there are no conclusive data to indicate how effective the policies have been.

Manila

A less direct but no more successful attempt to discourage the entry of migrants to the city is seen at Manila.[19] In 1963, the newly elected mayor implemented an election promise to provide free education to city residents. However, this provision applied only to *bona fide* residents of Manila—migrants and commuters had to pay a large fee to enter the school system. Administering the system proved extremely difficult. Claims of residence were supposed to be proven by certificates of tax payments, sworn statements (affidavits) and a residence certificate. Most migrants were too poor to pay taxes, yet they were often willing to pay a lawyer the fee for drawing up an affidavit. Anyone with 60 centavos was able to get a residence certificate, even with a fictitious address. The result was predictable: petty corruption, on the one hand; and the rapid increase in the city school enrolment, on the other. By 1968, the city of Manila was spending more than a third of its budget on education alone.

South Africa

The application of very tight controls, national identification cards and internal passports to control migration has been effective in keeping migrants out of cities in South Africa.[20] The South African pass laws permit black male workers to move to urban areas for employment, while black women and children remain in the towns in the vicinity or in homeland villages. Illegal workers and squatter settlements with families are occasionally "deported". Urban squalor, however, is exported outside city boundaries to "dormitory slums" within commuting distance.

Eastern Europe

The centrally planned economies of Eastern Europe have had mixed success in applying bans on movement to metropolitan cities. Between 1965 and 1970, Poland registered all citizens in allocated housing on a prescribed basis. In order to move, a person was required to have an employment offer in the new locality and approval from local authorities.[21]

Similarly, in Hungary and in the Union of Soviet Socialist Republics, migration to restricted cities is possible only for persons with needed work skills.[22] Such measures would appear to offer complete assurance of policy success in achieving the goal of reduced metropolitan growth. In practice, however, the policies may have limited impact due to conflict between population distribution schemes and industrial planning.

In the Soviet Union, industrial planning has taken priority over territorial and housing concerns. Economists focusing on production have argued for

[14] R. Critchfield, loc. cit.

[15] G. Krausse, loc. cit., p. 60.

[16] J. Williams, loc. cit.

[17] Gavin W. Jones, "What do we know about the labour force in Indonesia? ", *Majlah Demografi Indonesia* (Jakarta, IPADI Lembaga Demografi, Facultas Ekonomi, Universitas Indonesia), vol. 2 (December 1974).

[18] Gustav F. Papenek, "The poor of Jakarta", *Economic Development and Cultural Change*, vol. 24, No. 1 (October 1975), pp. 1–28; and G. Krausse, loc. cit., p. 60.

[19] For sources, see Alan B. Simmons, "Slowing metropolitan city growth in Asia: policies, programs and results", *Population and Development Review*, vol. 5, No. 1 (March 1979), p. 93.

[20] T. J. D. Fair and R. J. Davies, "Constrained urbanization: white South Africa and black Africa compared", in Brian J. L. Berry, ed., *Urbanization and Counterurbanization*, Urban Affairs Annual Reviews, vol. 11 (Beverly Hills, California, and London, Sage Publications, 1976), pp. 145–168.

[21] Zbigniew M. Fallenbuchl, "Internal migration and economic development under socialism: the case of Poland ", in Alan A. Brown and Egon Neuberger, eds., *Internal Migration: A Comparative Perspective* (New York, Academic Press, 1977), pp. 305–327.

[22] R. J. Fuchs and G. J. Demko, loc. cit.

locating firms in larger cities, where scale and agglomeration economies are greater.[23] As a result, restrictions on labour mobility may have been only marginally effective in reducing metropolitan growth. Certainly, cities in the USSR have continued to grow quickly in recent years, although perhaps less quickly than might have been the case without migration constraints.

Of the Eastern European countries, perhaps only Hungary has effectively reduced metropolitan growth. Between 1971 and 1975, the annual rate of net migration to Budapest dropped from 0.97 per cent to 0.24 per cent per annum.[24] This decline occurred primarily because industrial investment and employment decreased at Budapest and increased in other areas, particularly the Hungarian Plain region. In Hungary, State-owned industrial firms make their own location and investment decisions; hence, their movement to the Plain region occurred not as a result of administrative decree but rather of infrastructural investments on the Plain and zoning restrictions at Budapest. In addition, labour was scarce at Budapest and plentiful on the Plain. Housing investment policy prevented a transfer of labour from the Plain to Budapest; hence, the factories had an additional incentive to shift to the Plain.

China

Among the developing countries of the world, China provides a significant example of direct regulations to control migration. In order to migrate to the city, Chinese citizens must obtain both a "removal certificate" (from authorities in the place of current residence) and an employment offer or a school registration certificate from urban authorities. The migrant also requires approval from the urban agency responsible for population registers.[25] Other disincentives include a food-rationing system for urban non-agricultural workers, restrictions on urban firms from hiring in rural areas and the turning-back of unauthorized migrants at check-points on roads and at omnibus depots and railway terminals.

Evidence on urbanization patterns in China is scanty, but apparently the growth of large cities decreased during the period of controls, although overall urbanization increased due to the movement of farmers into local towns and the growth of smaller administrative cities.[26] The period of strong migration controls in China in the late 1960s was part of an intense rural development effort, with many attempts to create self-sufficient rural communities ("walking on two legs"). Significant resources were directed away from large-scale urban industrial development. The question is what will happen in the large cities of China now that there appears to be a return to national programmes of modern technology and heavy manufacturing. The answer depends upon the industrial location strategy it will pursue.

D. Dormitory towns and satellite cities

A number of countries have sought to slow the growth of large cities by building, some distance from them, dormitory towns, industrial parks and even satellite cities complete with both housing and industry. If the new peripheral centres are within commuting distance of the existing metropolitan area, then individuals and firms can take advantage of proximity to various services and markets concentrated in the core city (i.e., agglomerative economies are not lost).

Dormitory towns within a commuting radius of a major city and separated from it by a "green belt" have been developed in a number of developed and developing countries with variable success. In Western Europe, for example, Paris has followed the earlier experiment around London by constructing five new towns in the vicinity, each designed to house 500,000 inhabitants. As a result of the application of strict zoning laws on housing, the towns are growing as expected.[27] Similar results have been obtained in some Eastern European countries, such as Hungary and Poland, where restrictions on migration to the major cities and industrial labour shortages in the same cities give rise to extensive commuting from villages in the vicinity.[28]

In developing countries, some efforts to establish urban settlements peripheral to metropolitan cities have resulted in an outright failure. Other attempts have been successful in relocating population, although perhaps not so successful in improving the welfare of the migrant groups. For example, efforts launched in the 1960s by the mayor of Manila to raze shanty towns and to resettle residents 30 kilometres or more from the city centre led to unforeseen problems.[29] Those problems included riots, the hasty return to the city centre of many who were relocated and the eventual acquiescence of civil authorities to squatter demands for land in existing slum areas so that they would have ready access to work and urban services. Mexico City sought to relocate manufacturing in special industrial parks at the edge of the city.

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[23] George A. Huzinec, "The impact of industrial decision-making upon the Soviet urban hierarchy", *Urban Studies*, vol. 15, No. 2 (June 1978), pp. 139–148.

[24] George J. Demko, Roland J. Fuchs and Thomas J. Camarco, "Population redistribution policies in Hungary and an assessment of this effectiveness", Columbus, Ohio State University, Department of Geography, 1978 (mimeographed).

[25] Thomas P. Bernstein, *Up to the Mountains and Down to the Villages: The Transfer of Youth from Urban to Rural China* (New Haven, Connecticut, Yale University Press, 1977).

[26] Cheng-siang Chen, "Population growth and urbanization in China, 1953–1970", *Geographical Review*, vol. 63, No. 1 (1973), pp. 68–72.

[27] Niles M. Hansen, *French Regional Planning* (Bloomington, Indiana, Indiana University Press, 1968).

[28] Roland J. Fuchs and George J. Demko, "Commuting in Eastern Europe: causes, characteristics, consequences", *East European Quarterly*, vol. 11, No. 4 (1977), pp. 463–475.

[29] Aprodicio A. Laquian, *The City in Nation-Building* (Manila, University of the Philippines, School of Public Administration, 1966); and idem, op. cit.

The locations, however, were close to the metropolis so that workers commuted to them from existing residential areas. The parks were soon absorbed into the expanding metropolis.[30]

Rio de Janeiro

At Rio de Janeiro policy towards slum-dwellers has fluctuated under different governments. In the late 1960s and early 1970s, the city eradicated *favelas* on hillsides near the centre of the city by means of a "carrot-and-stick" policy. Zoning laws and forced eviction were combined with relocation assistance and low-cost housing just outside the city.[31] But even the low-cost rents were too high for many of the relocated families and as many as 60 per cent defaulted on rent payments. A significant number eventually returned to squatting, mostly in peripheral towns, because zoning enforcement against squatting within the city became increasingly forbidden. Many new *favela* settlements are continuing to be established on the northern and western fringes of the city—it was estimated that Rio de Janeiro had 273 *favelas* in 1977, containing 1 million inhabitants or 20 per cent of the city population.[32] Work opportunities are concentrated in the city centre and poor transportation is a great drain on the time and incomes of the fringe *favela* dwellers.

The outcome of this *favela* eradication programme may be summarized as follows:

(*a*) Considering only the three-year period 1969–1971, the population resettlement objectives of the city government were largely achieved. More than 16,000 squatter dwellings were destroyed; and in this manner, valuable land within the city was made available for commerce and accommodations for higher income families;

(*b*) The housing authority responsible for relocating the squatters suffered a financial collapse, due principally to the high level of default on repayments in the new housing estates;

(*c*) The economic position of the squatters did not improve and may have deteriorated;

(*d*) The government abandoned slum eradication programmes and shifted to the organization of housing developments for citizens with adequate resources to pay the mortgage costs.

Dakar and Lima

Among the moderately successful dormitory-city schemes one may include the town of Pekine, about 8 kilometres outside of Dakar, Senegal; and various *pueblos jovenes* (young communities) in the hills adjacent to Lima, Peru. About 200,000 people live at Pekine, drawn there by strict residential zoning laws at Dakar and certain services, such as communal water taps and electricity, at the dormitory town. Omnibus service to the city is functional (although less than adequate); the town is well designed; and a World Bank "sites and services" project is under way to improve housing and services.[33]

The *pueblos jovenes* around Lima were established primarily to deal with clandestine land invasions and initial squatter-town development which had already taken place in the hills 10–12 miles from the central city. Their establishment included identification of town sites, allocation of lots free of charge, provision of basic services, setting-up of municipal governments and improvement of transportation routes to the city. Everything else, including the building of houses and the establishment of municipal services, was left up to the families and their municipal councils. Over time, they became an important destination for new migrants arriving in the city.[34] Slum eradication programmes and resettlement schemes played only a minor role in the growth of the *pueblos jovenes*.

Under pressure from continuing in-migration, these dormitory towns had grown to house more than 1 million people by 1975, or nearly one quarter of the population in the metropolitan region of Lima. This growth took place despite the fact that the Government of Peru has, since 1969, given priority to investment in rural areas, such that the poor within Lima and in the surrounding towns received little financial help.[35] Pekine and the *pueblos jovenes* reflect the low incomes of their inhabitants. Although they continue to accommodate population migrating towards the metropolitan region, they serve to decongest the principal urban area and to provide access to employment and urban services for their residents.

Hong Kong

Dormitory-city policies that provide significant improvements in the living conditions of their residents are very expensive and beyond the capabilities of most countries. Hong Kong cannot yet be considered "developed", but it has a relatively high level of resources available for urban programmes and provides an interesting example of what can be done if economic and political conditions are favourable.

The population of Hong Kong is currently approaching 5 million, in a total land area of only 404 square miles. Much of the land is unfavourable to urban development due to the prevalence of rocky and precipitous hillside.[36] About 90 per cent of the avail-

[30] W. A. Cornelius, loc. cit.

[31] Alejandro Portes, "Housing policy, urban poverty, and the State: the *favelas* of Rio de Janeiro, 1972-1976", *Latin American Research Review*, vol. XIV, No. 2 (1979), pp. 3–24.

[32] Ibid., p. 19.

[33] World Bank, Transportation and Urban Projects Department, *Sites and Services Projects* (Washington, D.C., 1974).

[34] Henry A. Dietz, "Metropolitan Lima: urban problem solving under military rule", in Wayne A. Cornelius and Robert V. Kemper, eds., *Metropolitan Latin America, The Challenge and the Response*, Latin American Urban Research Series, vol. 6 (Beverly Hills, California, and London, Sage Publications, 1978), p. 209.

[35] Ibid., p. 224.

[36] Y. C. Jao, "Land use policy and land taxation in Hong Kong", in John Wong, ed., *The Cities of Asia: A Study of Urban Solutions and Urban Finance* (Singapore, Singapore University Press, 1976), p. 278.

able land is in the New Territories leased from China in 1898 for 99 years. Although Hong Kong is an urban area without a rural hinterland, over the past two decades similar congestion problems have been shared with most less developed countries. Higher income and employment opportunities in Hong Kong have exerted a strong "pull" on Chinese communities in Eastern South Asia. Illegal immigration has been largely controlled in recent years but legal migration continues. In 1973, for example, approximately 90,000 people entered Hong Kong, about 70 per cent of them legally.[37] About 40 per cent of the total population of Hong Kong was born elsewhere. Fertility rates dropped to rather low levels in the decade after 1963; but as children born in earlier years become adults, the higher population growth prior to that decline is still augmenting the demand for housing.

Since 1955, as a result of previous immigration and high fertility, Hong Kong has struggled with a large deficit in housing and with problems arising from extensive slums. Public housing programmes began in 1953 following a disastrous fire in a squatter area which left 50,000 people homeless.[38] At first, the construction consisted of inexpensive low-rise apartments, each apartment with approximately 120 square feet designed to accommodate a five-person family. Toilets and wash-room facilities were centrally located and communally operated. Since then, standards have improved and upgraded housing programmes have expanded. The programmes are so extensive that by the mid-1980s it is estimated that 57 per cent of the entire population will live in public housing estates, generally at rents from 60 to 80 per cent less than those in the private housing market.[39]

Because land in the urban areas of Hong Kong is very limited, the city has begun developing towns in the New Territories and on the east coast of the Kowloon Peninsula. Four new towns—Kwun Tong, Tsuen Wan, Shatin and Tuen Mun—are being built to house an estimated 2.2 million persons or 40 per cent of the projected population of Hong Kong in 1984. The Tsunwan site will have an adjoining industrial estate and harbour.[40]

The policies for urban decentralization in Hong Kong are multiple, overlapping and mutually reinforcing. Industrial investment and growth are based on private capital, and land purchase prices reflect market value. Building and use are heavily zoned, however. Housing is increasingly in government hands; hence, in addition to normal zoning regulations on residential constructions, the government has access to a major policy tool. Heavy investments are currently being made in commuter transportation.

Hong Kong has several advantages over other cities with regard to planning dormitory towns and satellite cities:

(*a*) Because of its status, it does not suffer from the conflict between central and local government, and the related problems of revenue sharing (who will pay for and who will benefit from social services) do not arise;

(*b*) In contrast to the situation in most developing countries, the land in Hong Kong belongs to the government. Private investors can buy and sell leased land, but the government can readily reclaim land for public purposes;

(*c*) Although most developing country cities experience one fiscal crisis after another, Hong Kong is an affluent city with good administrative controls and effective taxing bodies. Hence, resources are available for costly public programmes.

(*d*) The city is heavily industrialized and has no impoverished rural hinterland to develop. Resources can go directly into urban decentralization programmes compatible with economic growth;

(*e*) The government is stable and effective, and zoning regulations are thoroughly enforced and obeyed.

E. Industrial growth poles

Congestion in metropolitan cities can be relieved if industry and spin-off job opportunities are successfully located in other smaller cities (or even rural areas) and urban workers and new migrants are directed there. The "growth-pole" concept assumes that initial government expenditures in local economic infrastructure—highways, electricity, ports and so on—will lead to self-sustaining economic growth in sparsely settled or previously economically disadvantaged regions. Many national economic plans throughout the developing countries of the world identify potential growth-pole centres and mechanisms to encourage their development.

Industrial growth-pole schemes implemented to date in developing countries have been fraught with unexpected problems.[41] Direct outlays and subsidies for growth-pole ventures have proved extremely expensive and have had a sobering effect on Governments. Skilled workers have been reluctant to leave their homes in the large urban areas even when attracted by high wages. Small industries in particular have been hesitant to move to distant locations because small firms require access to products from other intermediate-sized firms in the metropolis; they also require ongoing contact with their clientele and depend heavily upon urban repair services. Some large firms can overcome these difficulties with purchasing and sale offices in the metropolis, by taking their own maintenance and workers to the growth-pole site and by negotiating with Governments to obtain large subsidies for transportation facilities, town planning, electricity and ports. As a result, successful growth-

[37] Ibid.
[38] Ibid., p. 280.
[39] Ibid., pp. 282–283.
[40] Ibid., pp. 289–290.

[41] S. E. Findley, op. cit.; and Louis Lefeber and Mrinal Datta-Chaudhuri, *Regional Development Experiences and Prospects in South and Southeast Asia* (Paris, Mouton, 1971).

pole efforts are both few in number and restricted to the activities of larger firms, particularly in such countries as Venezuela and the Republic of Korea, which are at an intermediate stage of economic development.

Ciudad Guayana

An important experiment to create an urban alternative in Latin America is the expansion of Ciudad Guayana in Venezuela. From a small mining town at the confluence of the Orinoco and Caroni rivers, planners and engineers built a city for a population of 300,000 to be reached by 1980.[42] The development authority for the region established a steel mill and expanded ports in the vicinity. Vast investments were made in social overhead and infrastructure. As Gilbert states:

> "Venezuela had enormous funds from petroleum revenues with which to support the Guayana project; between 1965 and 1975, its income was budgeted at US $3.8 billion, of which US $2.0 billion would come from the national government. The size of this budget can be seen if it is compared to the total government budget of neighbouring Colombia, a country with more than twice as many inhabitants. While the Venezuelan Government spent US $200 million annually on the Guayana project, the Colombians' total budget was a mere five times higher."[43]

This scale of investment at Ciudad Guayana is rarely within the reach of countries that do not have the oil and mineral wealth of Venezuela. Even with full financial support, however, Ciudad Guayana has had problems. From the outset, the orderly projections of planners were upset by migrants flocking to the area and building their shanties in every section. In time, the city extended services and amenities to the poor residential populations.

Republic of Korea

Industrial and urban decentralization programmes in the Republic of Korea appear to provide a clearly successful case in contrast to many other experiments in Asia. A major objective behind these programmes was to reduce the growth of Seoul. Over the period from 1966 to 1970, the population of Seoul grew at 9.8 per cent per annum, a rate which would double the population of the city approximately every seven years, if it were to continue.[44] Industrial and population concentration in the city created a double problem: urban congestion; and the danger to national security of having such a large proportion of productive capacity close to the border with the Democratic People's Republic of Korea. During the early 1970s, the Government introduced tax and credit incentives to industrial investment in alternative locations. Evaluative studies report that these policies had a dramatic impact. The growth of Seoul dropped to around 4.5 per cent per annum; smaller cities around Seoul grew at an impressive rate of 12.7 per cent per annum.[45] One commentator [46] takes note that the success of the Republic of Korea in slowing the growth of Seoul is "unique" among developing market economies and may be the result of equally unique development circumstances: (*a*) a small land area; (*b*) a homogeneous language and culture; (*c*) good health-care delivery and schooling facilities spread throughout the country; (*d*) a stable (authoritarian) Government with high administrative competence; (*e*) rapidly declining rural population growth; and, last but not least, (*f*) a booming economy which has encouraged investors to locate in areas that might not have been their first choice. Much of the industrial growth and migration was directed to areas close to Seoul and Pusan, and hence could take advantage of support services, supplies and markets in these large cities.

F. Agricultural development

From the perspective of planners who wish to slow metropolitan growth, heavy investment in agricultural development has been viewed both as a possible panacea and as a potential danger. It is a possible panacea because it could increase rural incomes, absorb rural labour, slow the migration of landless workers and small farmers to the city and increase the demand for decentralized commerce and industry in towns and regional cities. It is a potential danger because rural investment could rob the city of its resources and skilled labour force, displace less skilled farm labour (through mechanization) and provide low returns to investment. In the latter case, one would solve metropolitan growth problems and possibly reduce rural-urban income differentials only at the cost of overall economic growth.

No simple answer to the planner's dilemma is currently available since the results of agricultural development programmes in different countries have led to diverse outcomes, depending upon local economic conditions and programme administration. The following selected findings are from countries that have successfully slowed metropolitan growth through agricultural development and urban-regional planning. The findings come from two centrally planned economies (Cuba and China) and one market economy (Malaysia).

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[42] Lloyd Rodwin, *Nations and Cities: A Comparison of Strategies for Urban Growth* (Boston, Houghton-Mifflin Co., 1970).

[43] Alan Gilbert, *Latin American Development: A Geographical Perspective* (Harmondsworth, Penguin Books, 1974), p. 265.

[44] Koichi Mera, "Population distribution policies in the Republic of Korea", World Bank Staff Working Paper, Washington, D.C., July 1976.

[45] Ibid.

[46] Joan M. Nelson, "Population redistribution policies and migrant's choices", draft paper prepared for the Seminar on New Conceptual Approaches to Migration in the Context of Urbanization, organized by the Committee on Urbanization and Population of the International Union for the Scientific Study of Population, Bellagio, Italy, 30 June–4 July 1978, pp. 18–19.

Havana

Although some capital cities in various developing countries have slowed their rate of growth, Havana is virtually unique in having reduced its growth to less than that for the country as a whole.[47] Various overlapping policies—agricultural development, new rural communities, urban slum eradication and national job and housing allocation—have contributed to this outcome.

Prior to the revolution, Havana grew to dominate all other urban areas in the country. By 1954, Havana was almost eight times larger than the second most populous city (Santiago de Cuba) and it contained roughly one fifth of the total population of Cuba.[48] The typical contradictions of a developing-country metropolis were evident—some sections were really extensive slums with large numbers of marginally productive and unemployed workers, including many beggars and prostitutes, while other sections resembled the middle-class suburbs and boutique districts of cities in developed countries. Immediately after the revolution, from 1959 to 1963, Havana grew quickly as an inward flow of migrants more than compensated for the persons leaving Cuba.[49] Subsequently, growth declined and may have been as low as 1.3 per cent per annum over the period 1970–1974. Average annual population growth over the longer period between 1959 and 1974 was 1.9 per cent for Havana and 2.1 per cent for the rest of the country,[50] suggesting that net emigration may have occurred. (The slower growth rate of Havana may also have resulted from differential fertility and mortality. Data are not available to evaluate the possible role as slow natural population growth which may have served to reduce the growth rate of Havana to a level below that for the country as a whole.)

The significant decline in the growth rate of Havana was principally achieved by an overall transfer of resources, investment, and employment to other areas of the country, particularly the agricultural sector. The following stages of this transfer are noteworthy:

(*a*) After an unsuccessful and expensive attempt to induce rapid industrialization in the earlier years of the revolution, Cuba changed directions and intensified agricultural development efforts. The shift was arduous and involved an important political and bureaucratic shuffle and many of those associated with the Ministry of Industry and earlier industrialization policies lost their positions.[51] In 1965, the Ministry of Food Industry was organized;

(*b*) To increase agricultural production, the Government decided to halt the flight of workers to towns and cities. Accordingly, annual median incomes in agriculture were adjusted steadily upward after 1966; by 1973, they almost equalled those in industry, whereas a few years earlier they had been only half as high (see table 10);

TABLE 10. CUBA: AGRICULTURAL AND INDUSTRIAL WAGES, 1962–1973

Year	Median wages (pesos)		Ratio of agricultural to industrial wages
	Agricultural	Industrial	
1962	954	1 941	0.49
1966	1 059	2 063	0.51
1972	1 301	1 565	0.83
1973	1 416	1 603	0.88

Source: Jorge R. Dominguez, *Cuba: Order and Revolution* (Cambridge, Massachusetts, and London, The Belknap Press of Harvard University Press, 1978), p. 390.

(*c*) Throughout the 1960s, other efforts to "urbanize" the countryside were undertaken; these efforts, among others, tended to ruralize access to "urban" services. The number of rural schools more than doubled and teaching personnel in rural areas more than trebled in the 1960s.[52] Rationing of scarce commodities and free health care in rural clinics were also introduced;

(*d*) The provision of new housing was placed under the Ministry of Construction. There was a clear preference for construction in rural areas where other economic developments with increased labour requirements were being undertaken.[53] By 1975, for example, a total of 296 *comunidades nuevas* were built, each housing around 120 families (150,000 people in total). The volunteer labour of *micro brigadas* was used extensively in order not to disrupt agricultural production and other economic activities;

(*e*) Havana continued to be a preferred location for specialized industry, advanced training schools and government ministries, but other economic activities were dispersed elsewhere. In addition, new residential zoning laws were established, Havana slums were eradicated and a 32,000-acre area was zoned around the city, and a large number of workers were resettled to dormitory cities. Alamar, for example, located five miles from Havana, is expected to house 150,000 people by the early 1980s;

(*f*) Residence permits, ration cards and worker identity cards were introduced in Cuba in 1962. There is no evidence that these measures and the registration systems associated with them were directly monitored to control migration into Havana; rather, it appears that the shifting structure of job opportunities, wages and housing benefits were designed to discourage workers from moving to the cities.

[47] Barent Landstreet, "Urbanization and ruralism in Cuba", Toronto, York University, Department of Sociology, 1978, p. 21 (mimeographed).

[48] Josef Gugler, "A minimum of urbanism and a maximum of realism: the Cuban experience", paper presented at the Ninth World Congress of Sociology, Uppsala, August 1978, p. 11.

[49] B. Landstreet, op. cit., pp. 19–20.

[50] Ibid., p. 21.

[51] Jorge R. Dominguez, *Cuba: Order and Revolution* (Cambridge, Massachusetts, and London, The Belknap Press of Harvard University Press, 1978), p. 390.

[52] Nelson Amaro and Carmelo Mesa Lago, "Inequality and classes", in Carmelo Mesa-Lago, ed., *Revolutionary Change in Cuba* (Pittsburgh, University of Pittsburgh Press, 1971), p. 345.

[53] B. Landstreet, op. cit., pp. 22–27.

The population distribution consequences of policies in Cuba are evident, but the way in which development policies and urbanization trends have affected overall economic performance is difficult to assess. To date, Cuba may be described as a country successful in improving the living conditions of the average citizen, which has taken place primarily through redistribution of economic resources and improved social services. Economic growth, however, has been very low, perhaps even negative—one estimate shows per capita incomes in Cuba declining at an annual rate of 0.06 per cent, on average, between 1960 and 1965.[54] This slow growth undoubtedly reflects many factors—the loss of skilled professional workers who went to the United States of America, errors made in early years and perhaps the long period required before investments in the agricultural sector can pay off. Cuba has invested heavily, for example, in fruit-trees, which take many years to mature.

Rustication in China[55]

Very few countries in the world have programmes designed to resettle urban-born families in rural areas. Yet within these countries the programmes are of startling magnitude and have led to the largest planned population shifts in the world. The extremely coercive programme in Democratic Kampuchea over recent years has forced hundreds of thousands of urban residents to rural areas where they have been made to work the land with little more than their bare hands. This programme is, of course, primarily motivated by political and ideological considerations largely independent of careful economic plans. In contrast, China has had for many years a variety of gradual, orderly *hsia-fang* ("sent down to the land") programmes addressing both economic and political objectives.[56]

In China, over the period 1969–1973, somewhere between 10 million and 15 million urban secondary-school graduates were "rusticated", that is, resettled in rural areas.[57] At the same time, administrative controls, including travel permits, access to ration cards etc., were used to prevent or limit the migration of peasants to the cities. These programmes were supported by widespread media propaganda and political action. In addition to minor programmes that were largely political in their goals, the really major programmes appear to have been primarily motivated by national economic considerations. The major goal was to stimulate agricultural production (*hsia-fang* was one of several reforms and efforts in this direction). Although it has not been publicly acknowledged, there is reason to believe that urban unemployment and the question of job placement for the burgeoning supply of secondary-school graduates beginning to appear in the cities[58] were important considerations.

The Chinese programmes were remarkably successful in transferring population to rural areas. In this way, the embarrassment of visible unemployment and poverty programmes may have been avoided. One reporter states that no beggars are seen in the cities of China; there are no shanty towns and no one sleeps in the streets.[59] This result was largely accomplished by instituting laws and administrative procedures that restrict freedom of movement.

It is difficult to say how much the rustication effort has contributed to rural development. Those reviewing the scattered evidence conclude that the students at first contributed little to production, but later did make economic contributions. In the beginning, they were not welcome in the rural communities where they were placed. Their cultural backgrounds were different. They lacked agricultural skills. Land and capital were in short supply, and extra labour could not always be effectively utilized. The students represented extra mouths to feed. One observer states that the costs of unemployment were not reduced; they were only shifted to rural households and communities.[60] Not surprisingly, many students were reluctant to go to rural areas, and they returned to the cities whenever administrative controls were relaxed. In 1974, a number of social and economic incentives were instituted to placate the rusticated youth. These incentives included improved rations, wages and living conditions; and resettlement in separate "youth points" where they formed their own productive teams rather than being integrated into peasant teams.

It appears that the rusticated students eventually did assimilate into the new communities. Therefore, their low wages and productivity during the initial period could be considered "investments" for future rural development. These conclusions are largely conjectural because accounts of the rustication movement are impressionistic and no quantitative data exist to evaluate how many resettled students have stayed, in what rural areas, what kind of work they do nor what their current economic contributions may be. The Chinese example does permit one to conclude, however, that resettlement of urbanities in the countryside is possible, through the use of laws, massive propaganda, widespread social support and effective administrative backing. In order to achieve this kind of resettlement without such supports, the restructuring of the economy to attract urban workers into agriculture would have to be even greater than that which China has been able to achieve. Policy-makers in other countries of Asia have not seriously pursued reverse migration as an economic development strategy.

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[54] World Bank, *World Bank Atlas: Population, Per Capita Product, and Growth Rates* (Wasshington, D.C., 1977), p. 20.

[55] This section is based on A. B. Simmons, "Slowing metropolitan city growth in Asia: policies, programs and results".

[56] T. P. Bernstein, op. cit.

[57] Parris H. Chang, "China's rustication movement", *Current History*, vol. 69, No. 408 (September 1975), pp. 85–89.

[58] Jan S. Prybyla, "*Hsia-fang*: the economics and politics of rustication in China", *Pacific Affairs*, vol. 48, No. 2 (Summer 1975), pp. 153–172.

[59] Ross Munro, "The real China: life in the city is only for the select few", *The Globe and Mail* (Toronto), 10 October 1977, pp. 1–2.

[60] P. H. Chang, loc. cit., p. 88.

New towns and land colonization in Malaysia

Malaysia has undertaken a series of programmes over the past 20 years to decentralize economic growth in various regions. Among these programmes is an energetic land development scheme begun in 1956 with the creation of the Federal Land Development Authority (FELDA); by 1977, 21 years later, FELDA had developed no less than 918,000 acres of land in rubber trees, oil-producing palms and sugar-cane.[61] In the process, FELDA settled approximately 41,000 families (3 per cent of the current rural population). A number of reports point to the success of the resettlement and the economic viability of the new communities. The investment requirements have been high: about 26,000 Malaysian dollars (approximately $US 12,000) were necessary to settle each family relocated in 1976.[62] This amount covered costs associated with clearing the land, constructing houses, providing fertilizer and tools and maintaining the family in the initial period. A typical FELDA scheme encompasses about 400 families (approximately 2,400 persons). Each settler receives a specific piece of land (about 10 acres) when his "loan" for resettlement costs is repaid; but most of the farming is done collectively, as part of a corporate enterprise.

The FELDA scheme and other resettlement schemes, combined with broader rural development programmes in Malaysia, have been rather successful in increasing rural production and raising rural incomes. The question is whether these measures have also lowered rural-urban migration; the answer is, most likely, yes. Between 1957 and 1970, the urban population of Malaysia grew at the same rate as the rural population: 2.6 per cent per annum.[63] As natural population growth was somewhat lower in urban areas, some rural-urban migration obviously took place over the period; but the rate appears to have been extremely low. Kuala Lumpur, the capital and largest city, grew only slightly more rapidly: 2.7 per cent per annum, a rate much lower than the metropolitan capitals of other countries of Asia.[64] Migration was directed towards such areas as Penang State, which had the advantage of FELDA financing for resettlement and rural development schemes. In contrast, Kelantan State, which did not utilize federal funds for land development (a party in opposition to the federal Government was in power there), suffered a net loss of migrants.[65] Perhaps as much as 8 per cent of all interstate migration in Malaysia in recent years has been a direct consequence of FELDA resettlement and an additional amount was undoubtedly a result of spin-off economic effects induced by FELDA schemes.[66] FELDA resettlement policy gave each new family an income of $M 300 per month, an amount four times the national average. While actual income figures were often much lower, the settlers appear to have gained from their move. A statistical analysis of the determinants of interstate migration reveals that the states that gained the largest numbers of migrants were distinguished primarily by having higher per capita income.[67] Not surprisingly, there is a backlog of applicants for participation in FELDA resettlement schemes.

Conclusions

It is difficult to draw general conclusions from a review of case studies taken from around the world. The difficulty is compounded when the case studies themselves are assembled from fragmentary research findings. Even if the studies were more systematic and thorough, one would face the problem of generalizing from a small number of cases, each from a given country with unique political, cultural and economic circumstances. The outcome of a particular intervention may have more to do with the specific national context where it was implemented than with the policy chosen. Although it is not possible to reach any firm conclusions or policy guide-lines from this review, the following tentative conclusions may be advanced for future study:

(a) *Developing countries with strong policies are more successful in implementing constraints on metropolitan city growth.* China, Cuba, Hong Kong, Malaysia and the Republic of Korea all have experienced some success in slowing metropolitan growth. They are obviously very different in terms of political orientation, culture, level of development and urbanization. Yet, in relation to many less successful countries (Mexico, Brazil, Indonesia and the Philippines), the successful countries are distinguished in several ways, including a high national priority on solving this problem, a greater allocation of resources and coordination across various levels of government;

(b) *Strong policies to slow city growth emerge when current trends in migration and urban concentration are seen to threaten national development goals.* The countries with strong policies appear to have important objectives in addition to the desire to eliminate slums and urban sprawl. These objectives were different in each country. The Republic of Korea, for example, pursued strong industrial and population decentralization policies not only to decongest Seoul but to move industrial capacity and human settlements away from its border with the Democratic People's Republic of Korea for reasons of security. China and Cuba instituted strong measures in the context of socialist revolutions, with a high national priority given to rural-urban equity and agricultural development as the basic strategy towards economic growth. In both

[61] Tunku Shamsul Bahrin and P. D. Perera, *FELDA: 21 Years of Land Development* (Malaysia, Ministry for Land and Regional Development, 1977).

[62] Ibid., p. 151.

[63] Lee Ying Soon, "An analysis of internal migration in Peninsular Malaysia: dimensions, causes and some policy implications", *The Philippine Economic Journal*, vol. XVI, Nos. 1–2 (1977), table 2.

[64] Ibid., table 3.

[65] Ibid., p. 18.

[66] Ibid.

[67] Ibid., table 5.

China and Cuba, the strong shift to agricultural and rural development came after earlier failures in rapid industrialization. Hong Kong, with no natural resources and very little land, urgently required space for factories and for housing its labour force. This need led to an emphasis on spatial planning and heavy investment in satellite towns. In the late 1940s and early 1950s, Malaysia embarked on policies to create new towns in an effort to control insurgents. The plan was to concentrate farmers and residents of scattered rural hamlets in secure towns where they would be protected from hostilities, would be provided with social services; and, significantly, would be unable to help the insurgents. Later land development and new community programmes built upon the success achieved in the earlier programmes;

(c) *Direct prohibition of migration is not necessary to slow metropolitan population growth; indirect controls operating through the distribution of jobs and housing are effective.* Direct controls on migration can be used to control migration even in countries where the advantages of the city are so great that many people would move into them if they could (e.g., South Africa). But this strategy requires a level of policing that is generally neither administratively feasible nor politically acceptable. Attempts to use such controls have often been "half-hearted" because there was not a strong political will to deny poor rural people access to the city (e.g., Manila and Jakarta). Such controls apparently work better when backed by major shifts in investment to improve life in non-metropolitan areas (China and Hungary). Most important, several countries have shown that direct controls on migration are not necessary, if sufficient resources can be shifted to alternative destinations. Cuba was apparently able effectively to slow the growth of Havana without using the direct administrative controls over migration to which it had access, because national investment and housing policy kept people from moving into the city. Malaysia, to which direct controls were inaccessible, was able to slow the growth of Kuala Lumpur through broad regional planning, zoning and land development;

(d) *Two-sided constraint policies which co-ordinate administrative and economic measures at the urban destination and rural source are most effective.* "Closed-city" policies, such as those applied at Jakarta, are largely ineffective because they are unrelated to policies intended to increase economic opportunity elsewhere. Similarly, growth-pole and rural-development policies that are unrelated to investment strategies in existing metropolitan centres will most likely fail. Unrelated schemes will be more expensive; and without financial support, industry will not be attracted. Both Cuba and the Republic of Korea reduced the growth of their capital cities by applying co-ordinated zoning and investment controls: in Cuba, through administrative decree on investment in agriculture and rural housing; in the Republic of Korea, through incentives and disincentives. Housing allocation and job assignment programmes in China and Hungary were co-ordinated in metropolitan areas and alternative destinations. Although Malaysia has some land allocation and regional programmes administered at the provincial level, the major programmes are administered nationally;

(e) *Centrally administered policies at a country-wide level are more likely to succeed.* The immediate problems of rapid metropolitan growth are probably first noted by municipal officials responsible for urban services, housing, land titles and traffic. They may react by crying for policies to stop migration into the city. Yet, other officials in industrial planning may continue to see the advantages of locating firms and national institutions (universities, military headquarters and so on) in the largest cities and will pay little attention to its future impact on the demand for urban services. If both go ahead with independent programmes, as is often the case (e.g., Indonesia and the Philippines), the programmes that have the greatest impact on employment demand will tend to have the greatest impact on migration patterns. This is true, as previously stated, even in the centrally planned economies, which have the administrative tools to control migration directly. In the Soviet Union, industrial planning led to continued metropolitan growth even when housing and occupational assignment programmes were designed to discourage it. When housing and industrial location policies are congruent, the effect on population movements is significant (Cuba and Hungary). Other countries are often unable to implement policies because of conflict between levels of government concerning who will finance and who will benefit from new programmes. When a decentralization policy is being pursued, the metropolitan area is likely to receive less in terms of investment and government revenues for social services. The Republic of Korea may have been more successful in its programmes because of a strong, stable central Government which could override provincial and metropolitan governments. Hong Kong has had the added advantage that there is only one level of government.

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VIII. REVIEW AND EVALUATION OF URBAN ACCOMMODATIONIST POLICIES IN POPULATION REDISTRIBUTION

*Aprodicio A. Laquian**

People were just recovering from the ravages of the Second World War when alarm began to be voiced over another invasion—the massive movement of people from villages to cities. In the early 1960s, the United Nations warned that 200 million people would move to the cities of Africa, Asia and Latin America within the decade.[1] Since it was feared that most of these migrants would find themselves in slum or squatter areas, frightful statistics on the proportion of urban-dwellers in such areas became a regular feature of reports on the world social situation.

Initial responses to the problems created by rural-urban migration were control-oriented, even punitive. They took the form of resettling people to rural areas or urban peripheries, demolition of shanty towns, curtailment of services to slum/squatter communities, exclusion of migrants from large cities; and the enactment of zoning codes, minimum housing standards and health regulations that sought to protect other city-dwellers from problems created by migrants.[2] Even measures for helping the rural and urban poor made it clear that migrants were not wanted. Thus, part of the justification for rural development was to keep people on the farm. Urban low-cost housing projects were reserved for *bona fide* city residents (they were priced beyond the means of most migrants, in the first place). Resettlement programmes sent people to far-flung frontier areas, away from cities. Even "sites and services" projects were located in isolated urban peripheries where there were no jobs and commuting cost too much.

Planners and administrators thought (and hoped) that the "mushrooming" of slum/squatter communities would be a temporary phenomenon. They were, therefore, reluctant to extend services to those areas. The so-called "amenities theory" was prevalent in their thinking.[3] According to this theory, it is urban amenities which attract migrants to cities: the more services are provided, the more people will come. It remained for migration research to show that real or imagined employment opportunities, combined with kinship ties, are the main reasons behind migration.[4]

There are very few areas of social policy where research findings have had much impact. One such area involves migrants who end in slum/squatter areas. The now classic study by Abrams on housing the urban poor was one of the earliest arguments for an accommodationist policy towards migrants. Realizing that in Venezuela, people would continue to move to the *ranchos* (squatter zones) no matter what the Government did, Abrams urged the Government to prepare and lay out sites for them: "*Rancheros* will settle where they can if they are not told where they may. They will build what they can afford if they are not helped to build what they should." His concern was less, however, about what they build than where it is built and less about "initial standards than about initial layout". In his view, *rancho* houses will improve with time and under better economic conditions if the *rancheros* "are given a stake".[5]

The pioneering work of Turner[6] in the *barriadas* (shanty towns) of Lima contributed to a fuller understanding of those communities. His insights helped to strengthen the case for accommodation. Migrants to Lima were classified by Turner into "bridgehead" movers and "consolidators". The new migrant goes to the central city slums where, with the help of relatives and friends, he gains a foothold. At this stage, his main concern is how to survive—to find a job, food and clothing—and how to gain useful skills. Housing is not that important. However, as the migrant's lot im-

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[1] "World urbanization trends, 1920–1960", *International Social Development Review, No. 1: Urbanization: Development Policies and Planning* (United Nations publication, Sales No. E.68.IV.1).

[2] For some comprehensive reviews on policies that directly or indirectly influence internal migration, see A. A. Laquian and Alan Simmons, "Public policies and migratory behaviour", Ottawa, Canada, International Development Research Centre, 1976; Alan Simmons, Sergio Diaz-Briquets and Aprodicio A. Laquian, *Social Change and Internal Migration: A Review of Research Findings from Africa, Asia and Latin America* (Ottawa, International Development Research Centre, 1977); Sally Evans Findley, *Planning for Internal Migration: A Review of the Issues and Policies in Developing Countries*, International Statistical Programs Center Research Document, No. 4 (Washington, D.C., United States Bureau of the Census, 1977); and Stuart Donelson, Jorge E. Hardoy and Susana Schkolnik, *Aid for Human Settlements in the Third World* (London, International Institute for Environment and Development, 1979).

[3] Alfred P. Van Huyck, *Planning for Sites and Services Programs*, Ideas and Methods Exchange, No. 68 (Washington, D.C., United States Agency for International Development, 1971), p. 6.

[4] See, for example, Pamela Briggs, "Some economic interpretations of case studies of urban migration in developing countries", World Bank, Urban and Regional Economics Division, Working Paper, No. 151, Washington, D.C., 1973.

[5] Charles Abrams, *Man's Struggle for Shelter in an Urbanizing World* (Cambridge, Massachusetts Institute of Technology Press, 1964).

[6] John F. C. Turner, "Barriers and channels for housing development in modernizing countries", *Journal of the American Institute of Planners*, vol. XXXIII, No. 3 (May 1967), pp. 167–181.

proves, he looks for a house, even if it is only a shanty on the periphery of the city. With further income, he consolidates his property; and, if the opportunities continue to be good, he becomes a real urban citizen.

In the early 1960s, the Ford Foundation gathered together the foremost urbanists in the world and challenged them with the development of Calcutta. It is significant that one of the most lasting results of that experiment has been the policy that planners should accommodate to the basic needs of the poor. For example, some urbanists[7] argued strongly to "preserve the existing housing stock" at Calcutta, no matter how shabby and dilapidated the structures were; Indian planners were cautioned against demolishing the *bustees*, because these slums provided certain important functions:

(*a*) Slums provide housing at rents that people can afford;

(*b*) They act as "reception centres" for migrants from the villages;

(*c*) They provide employment in family and cottage industries;

(*d*) They make mobility within the city possible so people can locate closer to jobs;

(*e*) They give the new migrant a sense of community and social support during times of difficulties;

(*f*) They encourage and reward small-scale entrepreneurs who invest in shanties and rent them to other poor people.[8]

In the mid-1960s and early 1970s, a veritable deluge of studies followed the paths blazed by Abrams, Turner and the Calcutta project. Studies at Manila documented the strong community organization of slum/squatter communities and proposed that uncontrolled settlements were "zones of transition" for migrants.[9] Studies in the *gecekondus* at Ankara and the *favelas* at Rio de Janeiro punctured the myth about the squatter's radical and revolutionary tendencies.[10] A survey at Nairobi revealed the tremendous economic investment of people in their substandard dwellings.[11] Another study showed that people are perfectly capable of organizing and running "housing companies" that provide housing for the poor at a tidy profit.[12]

Slowly but surely, the attitude towards migrant squatters/slum-dwellers changed from a punitive to a more accommodationist view. In 1972, the final benediction came when the World Bank set up its first sites and services project at Dakar, Senegal. It was not long before other agencies, such as the United States Agency for International Development and the Canadian International Development Agency, also supported sites and services projects. Realizing that the drift of people into cities shows no signs of abating, national and international agencies currently appear to be striking an attitude of "if you can't lick them, join them".

However, despite the trends mentioned above, accommodationist policies do not yet constitute the bulk of activities designed to cope with problems arising from internal migration. There is still a feeling that the dramatic sproutings of slum improvement and sites and services programmes only constitute a side-show in the total effort to cope with urban and regional problems. This attitude is, perhaps, only natural because the accommodationist measures introduced so far are incapable of changing the basic conditions that cause internal migration in the first place. Such conditions are embedded in the vast (and increasing) gap between conditions in the cities and the countryside, employment opportunities that are still largely found in the cities and the provision of services and amenities that favour urban areas. Until these basic conditions are changed, accommodationist policies can only serve as a palliative that may help ease local situations but are incapable of solving the roots of the problem.

To date, there are quite a number of policies that accommodate to migration rather than attempt to alter or impede people's movements. Some of the more important of these policies are: (*a*) recognition and legitimization of tenure of migrant squatters/slum-dwellers; (*b*) reception centres; (*c*) upgrading of slum/squatter communities; (*d*) sites and services projects; (*e*) low-cost housing; and (*f*) employment for migrants and the urban poor. These measures, of course, are not mutually exclusive and there are overlaps among them. However, they share in common the attitude that it is better to respond to the presence and continued arrival of migrants, rather than to keep them away or steer them to other destinations. In some instances, of course, the policies have been formulated by authorities who have simply resigned themselves to the fact that the migrants will continue to come, those already in the cities will stay there and the problems created by migrants will just not simply fade away.

In evaluating the measures mentioned above, it is necessary to define what constitutes a successful or an unsuccessful programme. The first touchstone for evaluation, of course, would be the explicit objective

[7] Colin Rosser, "Housing for the lowest-income groups: the Calcutta experience", *Ekistics*, vol. 31, No. 183 (February 1971), p. 129. See also Alfred P. Van Huyck, "The housing threshold for lowest-income groups: the case of India", in John D. Herbert and A. P. Van Huyck, eds., *Urban Planning in Developing Countries* (New York, Praeger Publishers, Inc., 1968), p. 67.

[8] C. Rosser, loc. cit.

[9] Aprodicio A. Laquian, *Slums Are for People: The Barrio Magsaysay Pilot Project in Philippine Urban Community Development* (Honolulu, East-West Centre Press, 1971). See also "The 'rurban' slum as zone of transition", in International Union of Local Authorities, *Studies in Comparative Local Governments* (The Hague, 1969).

[10] Ibrahim Sanli, *Internal Migration in Turkey* (Istanbul, Istanbul Technical University, 1974); see also Joan Nelson, "Sojourners vs. new urbanites: causes and consequences of temporary vs. permanent cityward migration in developing countries", *Economic Development and Cultural Change*, vol. 24, No. 4 (July 1976), pp. 721–757.

[11] Donna Haldane, "Survey of temporary structures", in Nairobi City Council and National Christian Council of Kenya, *Nairobi Urban Study* (Nairobi, 1971).

[12] David Etherton and others, *Mathare Valley: A Case Study of Uncontrolled Settlement in Nairobi* (Nairobi, University of Nairobi, Housing Research and Development Unit, 1971).

of the programme. In general, most policies aspire to improve the lot of the migrant, which is attempted by providing shelter and services. If these necessities are actually delivered to the target group for the programme, then it is a success. However, programmes cost money and authorities are forever seeking ways and means of optimally delivering services at minimal costs. Some cost-benefit analysis, therefore, is most useful in assessing the effectiveness of programmes.

In some instances, it is easier to spot failures than successes among accommodationist measures. For example, if a project is supposed to settle people in a place, their abandonment of the area is a clear sign of failure. Where projects require regular repayment by beneficiaries, non-payment or very low collections signify failure. Lastly, where projects expect that the people would eventually take over and run the activities themselves, their inability to do so would constitute failure. These tests of success and failure would be used in evaluating the accommodationist measures that follow.

A. Legitimization of tenure

In many countries, the first accommodationist measure for migrants is simply a recognition of the fact that they exist. Because migrant squatters and slum-dwellers are such an embarrassment to Governments, they are usually ignored. The pretext that they do not exist is a handy excuse for not providing them with urban services.

In some instances, migrants prefer to be ignored because when they are noticed, authorities appear to be determined to eradicate them. The City of Manila, for example, was charged by law to "abate nuisances", a statute used by a former mayor to raze squatter shanties at Intramuros and resettle them to a site 30 kilometres from the city centre.[13]

The shift from a punitive to a more accommodationist stance at Manila can be seen in the fact that 10 years later, similar efforts to bulldoze squatter shanties at Tondo were stayed by a Presidential order. The Government recognized the people's claims on the land and agreed to sell it to *bona fide* residents of Tondo.[14] As is usual with such politically charged policies, however, it took another decade before the issue was resolved. In 1978, the Government of the Philippines agreed to sell the land to the people at 5.00 pesos per square metre (about $0.68). This agreement still did not resolve the case because a "development charge" of about $13.65 per square metre was levied by the authorities.

Despite this tumultuous history of the people's fight for legitimacy at Tondo, the positive results of legitimization were clearly revealed when the land was sold to them. A study of housing consolidation in the community showed a dramatic improvement in the houses immediately after the sale. Even the rate of repayment for the amortization increased dramatically. In fact, once the land sale was approved, quite a number of residents proposed to buy the lots outright, instead of waiting for 20 years, which was the prescribed instalment period. In some manner, by calling on their savings, loans from relatives and friends, and the sale of rural properties, these people were able to raise the entire price for the lot.[15]

Lack of legitimacy of squatter areas is often used by Governments as a reason for denying the areas urban services. In one instance in Morocco,[16] the Government identified existing *bidonvilles* and marked their boundaries by iron posts painted orange. Any shack built beyond the marker was promptly torn down by the police. Squatters were told not to use permanent materials on their houses because these were ruled as being "temporary" and awaiting demolition. Water supply, sanitation and other services to the squatters were kept to a minimum. Since the temporary shacks were marked for demolition, it was argued that putting in services or allowing the people to improve their houses would only make later demolition that much more difficult. Of course, the *bidonvilles* continued to grow and the Government never got around to tearing them down. It eventually became necessary to recognize the legitimacy of the slum/squatter areas, but the people had to suffer and fight in the process.

The classic case study of the way in which the use of police power does not work is the widely quoted report on Pampa de Cuevas, Lima, Peru.[17] The *barriada* of Pampa de Cuevas was formed overnight by an "invasion" of public land by squatters on 17 November 1960. A lengthy and violent battle with the police followed. Later, however, the Government recognized the right of the people to stay on the land. Once the people obtained security of tenure, they improved their community and their dwellings so that Pampa de Cuevas is currently a prosperous community. The Government of Peru has also recognized the positive forces behind *barriada* formation. In fact, the term *barriada,* with its connotations of illegality and poverty, has been dropped by the authorities. Communities of the poor in Peru are now called *pueblos jovenes* (young towns or new towns) which stresses their developmental nature. A nation-wide programme for the improvement of these new towns has completely replaced the former punitive policies of the Government.

Legitimacy can sometimes be achieved by migrant squatters through failure of the Government to imple-

[13] A. A. Laquian, *The City in Nation-Building* (Manila, University of the Philippines, School of Public Administration, 1966).

[14] A. A. Laquian, *Slums Are for People.*

[15] Philippines, National Housing Authority, "Recent developments in the reblocking process in the Tondo foreshore area", Manila, Planning and Development Office, Research and analysis Division, 1978.

[16] Cited in A. P. Van Huyck, *Planning for Sites and Services Programs,* p. 6.

[17] J. F. C. Turner, loc. cit., p. 168. See also John F. C. Turner, "Uncontrolled urban settlement: problems and policies", in *International Social Development Review, No. 1: Urbanization: Development Policies and Planning* (United Nations publication, Sales No. E.68.IV.1), pp. 107–128.

ment rules and regulations, as occurred with "company housing" at Nairobi, Kenya.[18] In the early 1960s, squatters and slum-dwellers in Mathare Valley, the largest slum area at Nairobi, decided to form housing companies to provide shelter to the people. The squatters' resources were augmented by outside investors. The companies built some 7,628 single-room dwellings for rent. The "stockholders" were also allocated plots where they built their own huts. A study of the company operations revealed that they had an annual profit margin of 109 per cent. The company housing was built on private land. However, it was illegal in that the houses were "substandard" and were constructed without permits from the planning authorities. For various reasons, however, the authorities ignored the company housing so that they still exist. A World Bank sites and services project and an upgrading scheme funded by the European Development Fund are currently trying to improve upon the private company housing in Mathare Valley.

Examples given of positive effects of legitimizing squatters' claims should not ignore the fact, however, that not all such claims are legitimate and that security of tenure should not be given to all types of squatting. In general, migrants with low incomes find their way to areas in the city which are undesirable or even dangerous. Where migrant communities pose dangers to themselves and other city-dwellers, their claims to stay there should not be allowed. Examples of such dangerous sites are cliff-side *ranchos* at Caracas or *favelas* at Rio de Janeiro, where the gradient is too steep; communities in the *barrancas* (ravines) of Guatemala City or San Salvador, which are subject to flash floods; railway-track squatters at Manila, where *barung-barongs* (shanties) are only inches away from speeding trains; garbage dump *tugurios* (slums) outside Mexico City, where methane gas from fermenting garbage often explodes and causes fires; river-side *kampongs* at Jakarta, which are subject to flooding; or hillside squatters at Baguio City, the Philippines, which are endangered by landslides during the rainy season. Aside from these dangerous situations, claims of squatters to land needed for further city development should be denied. Social justice, after all, demands attention for the welfare of the greatest number, no matter how pitiful the plight is of the few.

B. . Reception centres for new migrants

The studies by Abrams, Rosser and Van Huyck called attention to the fact that slum/squatter areas act as reception centres for new migrants. Surveys and migrant life histories show that people do not blindly go to the city. They usually have "kinship chains" and "networks" of relatives and friends who help them. In recognition of this reception centre role of low-income communities, at least two programmes have been set up to formalize and institutionalize the idea of reception centres: the Sapang Palay project in the Philippines; and the Madipur Jhuggi-Jhonpri Scheme in India.[19]

Sapang Palay is a site about 30 kilometres north of Manila owned by the People's Homesite and Housing Corporation, a Philippine housing agency. In 1960, squatters from the inner city were resettled to Sapang Palay; but because there were no jobs on the site, the place was too distant and services were not available, more than 80 per cent of the people left. To make Sapang Palay more attractive, the Government hit upon the idea of transforming it into a reception centre. An agency, the Central Institute for the Training and Rehabilitation of Urban Squatters (CITRUS) was organized for the project. The agency subdivided the site, constructed temporary dwellings, invited private companies to locate at Sapang Palay by offering them free land and services; and organized a corps of trainers in such skills as carpentry, masonry and cottage industries. The idea was to attract migrants before they got to the slum/squatter areas of Manila. Those already in the slum/squatter areas who were evicted were temporarily resettled at Sapang Palay, trained and then placed in jobs and houses in the inner city.

Despite the innovative idea behind CITRUS, the scheme "soured" in no time at all. First of all, the former squatters/slum-dwellers resettled at Sapang Palay did not like the temporary arrangements. They regarded the site as a "housing project" where lots and houses could be obtained for residence or speculation. CITRUS was also less than successful in attracting private industries to locate at Sapang Palay. The Government did not allocate enough funds for the staff so that the training given to the project participants was not too useful. The project limped on for more than 10 years until it was mercifully terminated by the establishment of the National Housing Authority. Ironically, Sapang Palay itself thrived as a rural community, as those who elected to remain in the place decided to practise subsistence agriculture rather than commute to urban jobs.

In the Madipur Jhuggi-Jhonpri Scheme at Delhi, the same idea of a "pre-settlement project" was adopted. This scheme was one of 18 projects involving 50,000 plots launched by the Municipal Corporation of Delhi in 1967. At first, plots of 66.4 square metres were allocated to each family but these plots were reduced to 32.2 square meters and later to 20 square metres in the Madipur area itself. The people were instructed not to build any permanent structures as the scheme was meant as a temporary reception centre. They were promised that as more serviced land was opened at Delhi, they would be moved there.[20]

Not surprisingly, however, the people decided that a

[18] D. Etherton and others, op. cit.

[19] Morris Juppenlatz, *Urban Squatter Resettlement: The Sapang Palay Case* (New York, 1965); and A. A. Laquian, *The City in Nation-Building*, chap. 6. For the Indian case, see Town and Country Planning Organization, *Jhuggi Jhonpri Settlement in Delhi* (Delhi, Ministry of Works and Housing, 1973).

[20] Ibid.

small plot in hand was better than a larger one still to be allocated. Some 87 per cent of the households in the scheme disobeyed the authorities and built permanent or semi-permanent structures on their plots. An evaluation of the scheme in 1972 revealed that the pre-settlement idea behind the scheme had been all but abandoned. The evaluators praised the people for their resourcefulness and blamed the planners for not anticipating service site needs for the more permanent community. The evaluation team recommended ways and means of rationalizing the land use for the community preparatory to transforming it into a permanent community.

As the two cases cited above amply demonstrate, migrants are often more realistic than planners in determining what will and will not work. Left to their own devices, migrants can find accommodation, jobs, food and urban services. Administrative schemes that try to formalize and institutionalize this process do not have the flexibility and resourcefulness that the migrants possess. The process of moving to a city, living there and surviving there is a complex and tricky venture. Administrative procedures cannot be substituted for this process. It is better, therefore, to accommodate to the realities of migration rather than attempt to replace personal decision-making with administrative interventions.

C. Upgrading of slum/squatter communities

Studies tracing the settlement of migrants in urban areas show that they do not randomly locate in various parts of the city. They usually have very sound reasons for choosing a locality: proximity to jobs; closeness to schools; access to main transport routes; the chance to be with relatives and friends; cheap land or house rents; or the chance to squat on public or private land. These reasons constitute benefits to migrants. It is precisely when these benefits are ignored, such as when migrants are relocated to urban peripheries, that serious problems arise.

The accommodationist policy of upgrading slum/squatter communities recognizes the logic behind settlement locations. In its usual form, community upgrading extends roads and pathways, water, sewer connections, schools, health clinics, electricity, garbage collection and other services to an existing community. In upgrading, one attempts to dislocate as few people as possible. People who are displaced because their dwellings get in the way of improvements are usually moved to adjacent "overspill areas" where serviced sites are available. Thus, at Lusaka, Zambia, new land was purchased by the City Council close to the upgrading sites to accommodate the displaced people. At Manila, the site of Dagat-Dagatan was reclaimed from the ocean to act as an overspill area for displaced Tondo people.

The main constraint in community upgrading is land. Old slum/squatter communities are usually close to the city centre, where land values are high. They also have very high densities and nearly 20 per cent of old residents commonly have to be moved out when land use is rationalized. To make community upgrading work, there is a need for effective land acquisition policies. Land-use controls have to be strictly adhered to as the subdivision of land into small plots to accommodate more people usually causes problems. Lastly, the secret behind community upgrading seems to be the co-operation of the people. Mutual help and self-help are absolutely necessary in community upgrading schemes because they lower costs and make it possible later to transfer responsibilities for management to the people themselves.

One problem with community upgrading is that even after the investment of considerable sums for infrastructure and services, communities still look like slums. Public authorities who are sensitive to aesthetic criticisms do not appreciate upgrading. Planners who see the merits in upgrading, however, have been quick to respond to such criticisms. In one Asian city, an upgrading project was shielded from foreign eyes by fencing it with palm fronds. In another, a concrete wall was built around the project and a colourful mural was painted on the wall. In still another project, the houses on the edge of the road were finished at considerable expense so they would appear presentable. The dwellings still being upgraded were thus shielded by the finished houses.

The main advantage of community upgrading is that it keeps community organizations intact. The organizations may be mutual-aid associations designed to help residents during difficult times, such as illness, death in the family or prolonged unemployment. They may be community protection associations to counter threats of eviction or to maintain peace and order in the community. These organizations, whatever they are, nicely complement governmental efforts for community improvement. In fact, throughout the world, associations based on traditional co-operative patterns have been co-opted by Governments to carry out community functions. Indian *panchayats* or *vikas mandals,* Philippine *barangays,* Indonesian *rukuns,* Ecuadorian *sindicos,* Kenyan *harambee* groups or Tanzanian *ujamaa* committees have been transformed into grass-roots governmental units to perform specific functions.

In their response to the organized power of community groups, planners have shown a strong accommodationist stance. The resources and abilities of community organizations are usually integrated with governmental efforts in community upgrading. Thus, in the projects of the Fundación Salvadorena de Desarollo y Vivienda Minima (FSVM), "mutual help" is a prerequisite of participation in a housing scheme. Each family is required to render services to the community. This service may take the form of joining a ditch-digging crew, helping a neighbour lay down a house foundation or participating in a brigade producing home-made bricks. Even when family members propose to pay a labourer to take their place in mutual-

help efforts, FSVM refuses, arguing that the purpose of mutual help is not to get the job done but to foster a spirit of co-operation among the people.[21]

An evaluation of mutual help in one FSVM project revealed that labour costs per family were lowered by 10 per cent by this approach. Even considering "shadow wages" (i.e., the income family members forgo to participate in mutual help), mutual help still produced a net benefit of $44 per family. On the negative side, tasks took 20 per cent longer to complete by mutual help, compared with those done by hired contractors. In two other FSVM projects, mutual help created serious controversy when 34 per cent of those who withdrew in one project and 65 per cent in another cited the mutual-help requirement as their reason. The people objected to the compulsory nature of mutual work. They felt that if they could afford to pay others to do their jobs, they should be allowed to do so.[22]

In the Philippines, administrators in the Tondo project are discovering that certain administrative tasks can be effectively done by community organizations. When community upgrading at Tondo took the form of "reblocking" (i.e., the rearrangement of houses to fit them into surveyed plots) one of the difficult tasks of the National Housing Authority was to decide which households should stay, which should move out and who should be allocated what plot. Any administrative procedure for making the decisions would have been suspect to the community. The National Housing Authority, therefore, wisely turned the responsibility over to community organizations. Since the community leaders knew all the claimants, they were able to allocate plots easily. The architects and planners of the Authority merely played an advisory role by making sure that plot lines were straight, road rights of way were respected or that each lot has access to a road. By turning over responsibility to the people, the Authority was able to do the job without conflicts and tensions.[23]

One final benefit from community upgrading is that costs for project participants are considerably lowered. Since existing dwellings are not torn down, investments in them are not wasted. In improving their dwellings, people are encouraged to use local materials such as rusty galvanized iron sheets, old lumber or recycled timber. Of course, upgraded communities may not look nice to the average middle-class viewer. However, experience has shown that with time, people do improve their dwellings as their income improves. Because upgrading accommodates to the actual living conditions of the urban poor, it is one of the best approaches for improving the lives of migrants.

[21] Fundación Salvadorena de Desarollo y Vivienda Minima, "Synthesis of the results of the evaluation during the first two years, and definition of research priorities for the coming years", Report No. 15, San Salvador, FSVM Socio-economic Evaluation Unit, 1977, pp. 28–38.

[22] Fundación Salvadorena de Desarollo y Vivienda Minima, "Evaluation of mutual assistance and its functions within the process of social change—the Sonsonate case", Report No. 12, San Salvador, FSVM Socio-economic Evaluation Unit, 1977.

[23] Philippines, National Housing Authority, op. cit.

D. Sites and services projects

In studies[24] of Latin American rural-urban migrants, it is observed that they usually move first to *corralones* (inner city slums) to gain a foothold. Later, when they feel more secure, migrants move to the periphery. From these observations came the accommodationist policy of sites and services. It was felt that if migrants were seeking land on the periphery of the city, there was no reason that the Government should not lay out serviced sites where they would be able to build their homes.

In the early 1970s, when the World Bank became interested in sites and services, Bank officials made the following justifications. First, it was estimated that urban growth in developing countries would be in excess of 4 per cent per year for the following two decades. In large cities, in fact, it was estimated that migration and natural growth would result in growth rates in excess of 6 per cent per annum. Secondly, the Bank estimated that conventional housing of even the most minimum standards would not be able to answer the shelter needs of people. Thirdly, the Bank took note that more than a third of city populations were already living in slum/squatter areas. Lastly, the Bank believed that the organizational and other resources in slum/squatter communities could be harnessed in self-help projects.[25]

The original concept of sites and services involved "new tracts of urbanized land in convenient locations with the basic supporting services needed to produce viable low income communities".[26] The advantages expected of sites and services were as follows:

(*a*) A greatly increased supply of building plots with infrastructure and services;

(*b*) Efficient new townships within better urban development patterns;

(*c*) Much better physical living conditions than those in unplanned squatter settlements, with greater opportunities for subsequent upgrading;

(*d*) Restraint on the growth of unplanned squatter settlements;

(*e*) Increased scope for self-help construction providing dwellings at minimum cost while stimulating non-monetary savings and income;

(*f*) Significantly improved employment opportunities and training;

[24] J. F. C. Turner, "Barriers and channels for housing development in modernizing countries" and "Uncontrolled urban settlement"; William Mangin, ed., *Peasants in Cities: Readings in the Anthropology of Urbanization* (Boston, Houghton-Mifflin, 1970); Anthony Leeds, "The significant variables determining the character of squatter settlements", *América Latina* (July–September 1969); and Joan M. Nelson, Migrants, *Urban Poverty and Instability in Developing Countries*, Occasional Papers in International Affairs, No. 22 (Cambridge, Massachusetts, Harvard University, Center for International Affairs, 1969).

[25] World Bank, Transportation and Urban Projects Department, *Sites and Services Projects* (Washington, D.C., 1974).

[26] Ibid., p. 6. See also A. A. Laquian, "Whither sites and services?", *Science*, vol. 92 (June 1976), pp. 950–955.

(*g*) Security of tenure and a basis for community development;

(*h*) More adequate social services;

(*i*) Better general environment.

The first sites and services project of the World Bank was at Dakar, Senegal.[27] The project involved $12.9 million for providing urbanized plots for 14,000 families at Dakar and 1,600 at Thies. About 400 hectares of land at Dakar were to be drained, graded and subdivided, along with 60 hectares at Thies. The plan was to construct local vehicular and pedestrian roads, a power distribution network, public taps and pit privies for 85 per cent of the lots and private connections and septic tanks for the remainder. Schools, health centres and sites for cultural and recreational activities also were to be provided.

It was projected that from 1972 to 1978, some 120,000 people would be moved to the site at Pikine on the outskirts of Dakar. To date, about 100 families have actually been moved. Land preparation, grading and lot subdivision had all been done at considerably higher costs than projected. The question is what went wrong.

The most important problem at Dakar was transportation. The project had anticipated that omnibuses plying routes between the city centre and Pikine would increase by 78 per cent between 1972 and 1978, and that the number of *cars rapides* (private taxis) would increase by 94 per cent. The increase did not occur and a "chicken-and-egg" situation ensued: whether people should move to the sites and attract the omnibuses or whether the omnibuses should come first to make it possible for people to live on the sites.

The houses planned by the housing agency were of such a high standard that they were beyond the ability of the people to pay. A model house cost 300,000 CFA francs, while the maximum loan given by the agency was 100,000 CFA francs. Government and commercial banks also refused to extend credit to the people for housing. The housing agency insisted on permanent materials for the dwellings. It prohibited the construction of temporary shelters that people could use on the site while working on the main house, thus delaying construction further.[28]

A serious problem was the lack of job opportunities near the site. More than 54 per cent of the project participants selected lived in the central part of the city and had their jobs there. To move to Pikine would have forced them to pay high transport costs. More time would also be spent in transit, during the construction period and afterwards.

The World Bank has set up more than 20 sites and services projects throughout the world since the project in Senegal, and errors in concept and design have been corrected. An in-depth monitoring and evaluation project jointly sponsored by the World Bank and the International Development Research Centre of Canada has been carried out since 1975 at Dakar, Manila, San Salvador and Lusaka.[29] From the preliminary evaluation results and experience in other projects, the main issues in sites and services apparently are:

(a) *Affordability*. The emphasis of Governments and the World Bank on "cost recovery" has led to projects that are beyond the means of 40 per cent of urban populations in developing countries. Sites and services projects assume that people can devote 15 per cent of their income for shelter and services. However, poor people do not only have low incomes—their incomes also tend to be irregular and unpredictable. Regular monthly payments are a strain on such people. A World Bank study has estimated that even if a sites and services approach can reduce the cheapest housing unit by 10 per cent, most people will still not be able to afford it. The proportion of people unable to afford even the cheapest housing was 42 per cent at Bogotá, 52 per cent at Madras, 58 per cent at Ahmedabad and 66 per cent at Nairobi;[30]

(b) *Design*. Closely related to affordability is the design of projects. Most sites and services projects require permanent materials, much of them imported, which raises costs. Infrastructure standards, often calling for water-borne sewerage systems and paved roads, add to expenses. Standards for plot sizes range from 45 to 350 square metres. Water connections are either shared (four families per tap) or individual connections are installed for each house. Some projects offer only a serviced plot; others have a basic core (usually a toilet, water-tap, kitchen sink, four walls and a roof). People may be allowed to use old materials (very rare cases) or they are extended a loan which enables them to buy standardized materials. Almost all projects assume that participants will consolidate and improve their dwellings after moving in. However, projects may vary as to the length of time they are allowed to finish the dwelling. In some rare cases, temporary shelters are allowed while the participants are working on the main house. In general, however, it is assumed that the participants will build permanent dwellings right away; and the design, materials used and project procedures assume they would have the means to do this;

(c) *Location*. The greatest mistakes in sites and services projects have been made by locating them in urban peripheries. As already mentioned, sites and services were regarded as "leading points" of

[27] World Bank, Special Projects Department, *Appraisal of a Site and Services Project, Senegal* (Washington, D.C., 1972).

[28] Senegal, Bureau d'evaluation du projet parcelles assainies, *Impact of Housing Consolidation on the Household Income*, Rapports d'evaluation sur la population de contrôle, Series No. 2 (Dakar, 1977).

[29] This project involves the collaborative efforts of the following agencies: Bureau d'evaluation de projet parcelles assainies, Dakar, Senegal; National Housing Authority, Manila, Philippines; Fundación Salvadorena de Desarollo y Vivienda Minima, San Salvador, El Salvador; and Housing Project Unit, Lusaka City Council, Lusaka, Zambia. The project was begun in 1975 and is due to be completed in 1981.

[30] World Bank, Development Economics Department, *Housing*, Sector Policy Paper (lWashington, D.C., 1975), table 28.

urbanization—influencing the pattern of growth of a city by providing serviced land in desirable areas. Cheaper peripheral land also made it easier for authorities to build projects there. However, project after project showed the folly of this approach as transportation and employment patterns made it very difficult for people to live in peripheral city communities. Sites and services projects are now being located closer to where the jobs are. There is also a trend towards establishing projects in intermediate cities and towns where cheaper land makes it possible to build projects closer to urban centres. The hope is expressed that sites and services projects in secondary urban centres will attract people there instead of their moving to primate cities. It is too early, however, to tell whether this approach will have its desired effects;

(d) *Scale.* Large sites and services projects that involve, say, 200,000 people, benefit from economies of scale and are easier to manage than many small projects scattered all over an urban area. To date, therefore, government and World Bank economists have favoured very large projects. However, the lumping together of homogeneously poor populations in large concentrations has had undesirable effects. Such projects become embarrassingly visible, especially when things are not working well. When a country is beset with ideological conflicts, they tend to polarize the population. Large projects make it extremely difficult to achieve political and social integration. Increasingly, therefore, smaller projects are being favoured. These projects are being located in various parts of the metropolitan area to enable them to blend with neighbourhoods. This trend to smaller projects is also facilitating popular participation as they become more accessible to people;

(e) *Management.* Very few Governments in developing countries have the management structures or trained personnel to run unfamiliar sites and services projects. Authorities are accustomed to managing standard housing projects which call for normal procedures. Some managerial issues are peculiar to sites and services projects. For example, community development that seeks to stimulate and catalyse people is required in sites and services. Accounting systems based on normal incomes and outlays are difficult to adjust to sites and services where voluntary labour, local resources and organized "sweat equity" may have to be considered. Financial authorities may expect regular payments on the fifteenth or at the end of each month. Project participants with irregular income may want to pay in advance during boom times and default during lean times. At the institutional level, it is doubtful if local and municipal governments have the management capabilities to manage sites and services projects. The World Bank, in fact, usually insists on setting up a special administrative structure, such as an urban development authority, to manage a project. Although many such authorities have been successful, they are usually so because they remove the best personnel from existing agencies.

To sum up, although the sites and services approach was originally seen as the panacea for all urban ills, experience has shown its limitations. It is not appropriate for the very rich or the very poor—the World Bank sets its applicability to the range from the fifteenth down to the sixtieth percentile of urban populations. Cheaper versions of sites and services, such as those combining it with upgrading or resettlement, may reach more poor people. However, without subsidies, even these measures will not really get very far.

E. Low-cost housing

One of the earliest efforts to accommodate to rural-urban migration was by providing migrants with low-cost houses. National housing agencies, international donor agencies and financial institutions have provided funds, materials and technical assistance for low-income housing projects in most developing countries. In most instances, however, such projects were constructed at costs beyond the ability to pay of more than a third of urban populations. Thus, the projects were allocated to civil servants, private-sector employees and those with secure and steady jobs. In some countries, access to such projects was limited to those with political contacts and influence.

Because public housing is so expensive, Governments could not really afford to build enough units. Typically, public housing authorities could barely provide from 5 to 10 per cent of the real housing need. The notable exceptions are Singapore and Hong Kong, where more than half of the households are living in public housing.[31]

Governmental programmes to provide finished housing to migrants is a direct influence of the "projects approach" encouraged by professional architects and planners who saw housing in terms of objects and structures. There was full realization that the majority of the migrants would not be able to pay for public housing. There was also awareness of the fact that limited government resources would not be sufficient effectively to meet the housing needs, especially of the urban poor. Still, hundreds of pilot housing projects proliferated in many developing countries.

Many reasons have been given for these projects. There was the justification of "trickle down", in which it was argued that providing public housing to those who could afford it released poorer quality housing abandoned by upwardly mobile people. The released units would be taken over by the poor, who would feel most fortunate that they could have a place in which to live. Actually, the trickle-down argument made little sense in countries where the volume of rural-urban migration was so high that the out-migration of public housing awardees scarcely made a dent in the housing market. To the extent that the trickle-down effect mattered, it actually had deleterious effects on low-

[31] Stephen H. K. Yeh and A. A. Laquian, eds., *Housing Asia's Millions* (Ottawa, Canada, International Development Research Centre, 1979).

income communities because it served to siphon off the squatters who were better off and leave the poorer people behind, contributing to the gradual but inevitable deterioration of low-income communities.

Another reason for the popularity of housing projects was the insistence of local and foreign financial institutions on "cost recovery". Economists argued that public housing was a poor investment for the meagre and expensive capital available in developing countries. Thus, to make investments in housing justifiable, stringent financial conditions were set to recover costs, including interest and development expenditures. What is neglected by many public housing authorities is the fact that almost all urban services are heavily subsidized by government directly or indirectly. Public highway programmes based on the motor-car, electricity, water-supply, sewerage and health services are made available to all citizens at considerable subsidies. The irony, in fact, is that these subsidized services are often more accessible to upper-income people at considerably less expense. All too frequently, the urban poor pay more for inferior services.

Lastly, the ineffective nature of public housing as an accommodationist measure is due to the fact that most housing projects are designed and planned by upper-class or middle-class professionals with little empathy or appreciation for the life-style of the poor. Such professionals design finished houses when the urban poor really need basic or core dwellings that can be improved as needs and resources dictate. Professionals work into the designs a middle-class sense of aesthetics that is neither needed nor appreciated by the poor. Professionals also insist on so-called "minimum housing standards" which reflect biases derived from their own life-styles and do not take into consideration the needs and ability to pay of poorer public housing clients. This insistence on aesthetics, finished housing and minimum standards combines to price public housing out of the reach of the poor migrants. When such migrants actually get the chance to go into the projects, the high costs eat into their meagre resources and they are forced to cut down on food and other necessities to pay for shelter or to default on payments. When some of the more enterprising among them sell their "rights" of occupancy or rent dwellings or rooms, it is seen as going against the rules and they are punished. These faults and problems, which are quite common to public housing projects, are usually seen as due to the perverseness of the urban poor rather than as errors in concept and design, which they usually are.

F. Employment

Further tests of the Harris/Todaro model[32] on internal migration have not really altered its conclusion that it is actual or expected job-related remuneration which is the primary motivation for moving. Other factors, such as kinship ties, educational opportunities and even housing, have been advanced as determinants but it is agreed that these factors are only secondary to employment. A number of policies, especially those related to the development of the "informal sector", have accommodated to the importance of employment to migrants. As in sites and services, however, providing employment in cities has been tempered by the fear that it will only serve to encourage more people to flock to the urban areas.

Some countries, such as the Philippines, have tried "make-work" projects designed to employ the urban poor. In the period 1961–1965, the Government set up the Emergency Employment Administration, which hired people to clean and dredge canals, cut grass, dig irrigation ditches and widen existing roads and pathways. The programme was stopped, however, because of its inflationary effects. Also, the motivation for the programme was more political (to get the votes of workers) than economic. More recently, the metropolitan government of Manila has introduced labour-intensive methods of delivering urban services. Instead of importing heavy equipment for street-cleaning, the city employs thousands of Metro Manila aides, men and women who keep specific areas clean and look after beautification. Aside from keeping the city clean, the programme also provides much-needed employment.

In 1969, the International Labour Organisation launched the World Employment Programme which, through action-research projects, has shown the importance of "informal-sector" employment. The characteristics of informal-sector employment have been described as involving:

(*a*) ease of entry;

(*b*) reliance on indigenous resources;

(*c*) family ownership of enterprises;

(*d*) small scale of operation;

(*e*) labour-intensive and adaptive technology;

(*f*) skills acquired outside the formal school system; and

(*g*) unregulated and competitive markets".[33]

Some studies of the World Employment Programme clearly indicate the extent and productivity of informal sector employment. A study of "slum industries" at Howrah, Calcutta,[34] enumerates 649 industrial units which employed some 4,433 people. Most of the units were small; 80 per cent employed less than 10 persons. The monetary value of all these industries, how-

[32] Michael P. Todaro, "Income expectations, rural-urban migration and employment in Africa", *International Labour Review*, vol. 104, No. 5 (November 1971), pp. 387–413. See also Henry Rempel and Michael P. Todaro, "Rural-to-urban labour migration in Kenya", in S. H. Ominde and C. N. Eijogu, eds., *Population Growth and Economic Development in Africa* (London, Heinemann Books, 1972), pp. 214–231.

[33] International Labour Organisation, *Employment, Incomes and Equality; A Strategy for Increasing Productive Employment in Kenya*, Report of an Inter-agency Team (Geneva, 1972), p. 6.

[34] A. N. Bose, "The informal sector in the Calcutta metropolitan economy", Working Paper No. 5 of World Employment Programme Series 2–19, Geneva, International Labour Office, October 1974.

ever, was a stunning $3.3 million, allocated among estimated value of rented lands and buildings (30.1 per cent); value of owned land and buildings (9.2 per cent); amount of working capital (36.4 per cent); and total value of machinery (24.3 per cent). Compared with formal-sector industries, the slum industries had several advantages. It cost only $196 per unit of machinery to employ a person in such industries and only 2 per cent of machinery was of foreign origin. Only $587 of productive capital was needed to employ one worker, as against $2,000 required by nationally registered factories in the formal sector.

A study of informal-sector employment at Jakarta[35] estimates that it provided almost 50 per cent of employment in the city. About 30 per cent of service-sector employment in trade, 18 per cent in transport and 15 per cent in construction were informal-sector jobs. Most trade at Jakarta was carried out by some 30,000 hawkers and vendors who occupied about 130 registered and unregistered markets with an average of 540 stalls per market. The earnings of those tradesmen ranged from $0.60 to $6.00 per day. However, since hawkers usually fed themselves and their families from their wares, employed quite a number of family members and served the urban poor, they constituted a significant portion of the economy of the city.

Another study of hawkers and vendors[36] estimates the number of such traders at 46,340 at Singapore, 53,510 at Hong Kong, 13,582 at Kuala Lumpur, 12,688 at Manila, 100,000 at Jakarta and 20,408 at Bandung. This study concentrates on policies affecting hawkers and presents a typology of positive and negative types in the six cities.

Among the positive policies are:

(*a*) Allowing hawkers to sell legally from locations they desire;

(*b*) Providing government loans to hawkers;

(*c*) Inducing people to enter hawking as an occupation;

(*d*) Not taking legal action against hawkers for employing children;

(*e*) Allowing existing marketing chains to remain;

(*f*) Making large firms distribute commodities through hawker outlets;

(*g*) Educating the public to utilize the hawkers' services;

(*h*) Encouraging an educational philosophy that emphasizes learning from experience rather than formal schooling.

The negative policies include:

(*a*) Clearing hawkers from all locations in the city and not allowing them to sell within the city;

(*b*) Imposing high license fees for hawking;

(*c*) Making hawking punishable by many legal restrictions;

(*d*) Offering higher salaries to employees of hawker enforcement agencies;

(*e*) Emphasizing the immorality of hawking;

(*f*) Stressing the possibilities of corruption and petty crimes associated with hawking;

(*g*) Stressing the dangers of hawkers from the point of view of hygiene etc.

In the cities studied, positive hawker policies were found at Kuala Lumpur, Malacca, Singapore and Hong Kong; negative policies were found at Manila and Baguio; and ambivalent policies were found at Jakarta and Bandung. The Government of Malaysia, in its efforts to encourage entrepreneurship among the Malay *bumiputra* ("sons of the soil"), supports hawkers and vendors by lending them capital, training them in business methods, constructing kiosks and markets for them and generally allowing them to sell their wares in desirable locations. At Singapore, hawker concentrations are planned in various parts of the city, although some of the choicest among them have now become part of the formal sector (the "car park" has been closed and a two-storey centre has been set up at Tanglin). In contrast, vendors at Manila at the time of the study were being arrested by the police and their goods confiscated. Vendors were tolerated during holidays and feast days, but such tolerance usually had its price in bribes to enforcement officials. Recently, perhaps in realization of the role that vendors play in the economy of the city, policies at metropolitan Manila have been shifting to a more positive type. Some streets at Manila are now cordoned off at night to enable vendors to sell their wares. In the so-called "tourist belt" in Ermita district, a number of "flea markets" have been encouraged by the city government. There is even a "farmers' market" in the area, where farmers and producers can bring and sell their produce directly. Aside from creating employment opportunities, these measures are benefiting citizens and tourists alike as they offer better wares at cheaper prices.

Another employment-creating part of the informal sector is low-cost transportation. At Jakarta, it is estimated[37] that some 84,000 people were employed as drivers and operators of *betjaks* (tricycles). In 1971, it was estimated that the value added by *betjaks* to gross domestic product in Jakarta was around $7.63 million in constant 1969 prices. This was about $100 per *betjak* per annum, which compares favourably with the per capita income in Indonesia.

A report on "para transit"[38] by the Organisation for Economic Co-operation and Development (OECD) lists some 40 local names for informal transport sys-

[35] S. V. Sethuraman, "Urbanisation and employment in Jakarta", Working Paper No. 6 of World Employment Programme Series 2–19, Geneva, International Labour Office, October 1974.

[36] T. G. McGee, "Hawkers in selected Southeast Asian cities", paper presented at the Conference on the Role of Marginal Distribution Systems in Developing Countries, Kuala Lumpur, Malaysia, September 1975, p. 11–8.

[37] S. V. Sethuraman, op. cit.

[38] Organisation for Economic Co-operation and Development, Development Centre, *Para Transit in the Developing World: Neglected Options for Urban Mobility* (Paris, 1977).

tems in 22 countries. Some of the colourful names for such systems are *colectivos* in Argentina, Chile and Ecuador; *peseros* in Mexico, *matatus* in Kenya, *kai kai* in Nigeria, *jeepneys* in the Philippines, *samlors* and *silors* in Thailand, *dolmus* in Turkey, *mammy wagons* in Ghana and *fula fula* in Zaire. Most of these transport modes began as illegal or semi-legal operations. They were set up in response to transport needs which normal omnibuses, trams and taxis could not meet. In Kenya, for example, there were only four *matatus* at Nairobi in 1970. By 1973, there were so many of them that the President had to sign a decree making their operations legal. Currently, there are more than 1,100 *matatus* at Nairobi and another 400 registered outside the city also operate within its limits. As much as a third of the passengers at Nairobi are said to be served by *matatus* daily. They are able to handle these people by dangerously overloading vehicle capacity and largely ignoring traffic rules and regulations.[39]

A comparative study of low-cost transport in Indonesia, the Philippines, Thailand and Turkey,[40] supported by the International Development Research Centre of Canada, shows that these systems are very labour-intensive. "Jeepneys" in the Philippines, for example, use two shifts of drivers six days a week. Aside from operators of low-cost transport, the system also provides employment for mechanics, metal workers, petty tradesmen in spare parts and fare collectors. By providing transportation for small traders, farmers, and hawkers and vendors, the low-cost transport system also increases employment opportunities for others.

As in the case of hawkers and vendors, initial reactions to low-cost transport were regulatory and punitive. Later policies, however, became more accommodating. Political pressures and a concern for the welfare of the public were important motivations for the shift in policies. There are still some cities, like Jakarta, which have banned the *betjaks* from certain sections of the city; or Bangkok, where *samlors* and *silors* are not allowed on certain streets. In general, however, more and more city governments are accommodating these transport modes. In the Philippines, in fact, the Government is organizing "jeepneys" into co-operatives to rationalize their operations.

Conclusion

Initial reactions to massive migration of villagers to cities in developing countries were control-oriented and punitive. Social science studies, however, called attention to the positive benefits brought about by rural-urban migrants. Even when migrants occupied festering slums or invaded lands to set up squatter communities, studies argued that they had organizational skills, human resources, funds and construction skills that made them assets rather than liabilities. The migrant squatter/slum-dweller became somewhat of a romanticized folk hero in some of the studies—industrious, co-operative, law-abiding, fiercely independent and innovative. It was not long, therefore, before this "poetry of the slum" became translated into accommodationist policies favouring migrants.

The initial break in policies involved ignoring, tolerating and subsequently legitimizing the presence of migrants in cities. Policies that assumed the slum/squatter communities to be temporary settlements waiting for demolition gave way to approaches that recognized their permanence. This attitude, in turn, enabled authorities to extend services to slum/squatter areas. Providing services soon led to community upgrading and urban community development programmes that built upon the resources of low-income communities.

To date, community upgrading promises to be one of the most useful and beneficial accommodationist policies. Because upgrading does not raze low-income communities, it is relatively inexpensive. Since it does not dislocate communities by resettling people, it maintains existing community organizations. People in upgraded communities are not taken away from their jobs. Of course, there are constraints to upgrading, such as the high cost of land, the need for high densities and management difficulties inherent in running small scattered projects. In general, however, upgrading appears to be a most realistic and accommodating approach.

Initial enthusiasm for sites and services has waned a bit because of persistent problems but the approach continues to be an important accommodationist policy. It is now recognized that sites and services can only benefit target groups within the range from the fifteenth to the sixtieth percentiles of urban populations. Emphasis on cost recovery and an aversion to subsidies prevents its use as an instrument to assist the poorest of the poor. Still, since the great bulk of urban populations fall within this target group, continued investment in sites and services is warranted.

Public housing for low-income people has not really accommodated to the needs of the poor among migrants. Because public housing is expensive, only a small portion of the people can be accommodated in these projects. The scarcity value of public housing units makes them attractive to middle-income and upper-income groups, who compete successfully for them. Because of these factors, public housing does not really constitute an effective instrument for accommodating to the needs of most migrants. Accommodationist policies that provide employment to rural-urban migrants have been very slow in com-

[39] Nairobi City Council, *Nairobi Metropolitan Growth Strategy Report* (Nairobi, City Planning Department, 1973).

[40] The organizations participating in this study of low-cost transport are: City University of Manila, Philippines; Istanbul Technical University and Special Authority for Transport and Electric Power, Istanbul, Turkey; Department of Social Sciences of Chiangmai University, Chiangmai, Thailand; and Bandung Institute of Technology and Gadjah Mada University, Bandung and Yogyakarta, respectively, Indonesia. Final reports on this project were expected in December 1979.

ing. Perhaps this is due to the fear that providing jobs in cities will only mean that more migrants will come. Some path-breaking studies on the informal sector, such as those related to petty trading and transportation, point to the high job-creating potentials in this area. These studies are beginning to have positive effects on policies in many countries where the former punitive and regulatory approaches are giving way to more accommodationist policies.

There is still a feeling that accommodation to migrants is being imposed on public authorities by reality. The fear is still widespread that accommodating migrants will only mean more of them will come. However, there is agreement that conditions of migrants in cities require that something should be done to improve their plight. Still, it is apparent that the problems of cities cannot be solved in them. A full array of policies of rural, regional and national scope is very much needed.

It must be realized that accommodationist measures constitute only a small portion of the total policies and programmes that can effectively solve problems arising from internal migration. In the final analysis, the main thrust of public policies should be preventive rather than curative. Something must be done about migrants already in the cities because ignoring them will not make them fade away and postponing action will only lead to further deterioration in urban areas. However, such accommodationist measures only cope with the symptoms. The problems of cities lie deeply embedded in the nature of society, especially in the allocation of power, wealth and resources. There are many policies and programmes that have been tried with various degrees of success or failure. Such measures include rural development, regional development, encouragement of growth in intermediate cities and towns, decentralization of governmental structures, growth centres and growth poles, infrastructure investments to open up new areas and the creation of job opportunities in places other than the central city. The specific mix of these various policies, of course, is dictated by the particular political, economic and social conditions in a country. The creative mixing of such options is the main policy challenge to planners and administrators of developing countries.

IX. A REVIEW AND EVALUATION OF ATTEMPTS TO DIRECT MIGRANTS TO SMALLER AND INTERMEDIATE-SIZED CITIES

*Niles Hansen**

Why should Governments attempt to direct migrants to intermediate-sized cities? A major reason is the perception by many Governments that their largest metropolitan areas are too large and that they are likely to become still larger without public intervention. In many national urban systems characterized by the dominance of one or a few metropolitan areas, explicit or implicit government policies have generated, promoted or at least permitted this situation in the first place. In addition, market forces may also promote the continuing growth of very large cities.

One of the major conclusions derivable from neoclassical economic theory is that factor mobility will equalize returns to various classes of homogeneous inputs, *ceteris paribus*. Space, however, is not homogeneous. Because clustering results in a wide variety of external economies for industrial and commercial firms as well as for households, purely market forces tend to concentrate economic activity in a few focal areas. These economies include, for example, relative abundance of public overhead capital, proximity to buyers and sellers, the presence of numerous auxiliary business services (banking, brokerage, insurance, advertising), educational facilities and a well-trained labour force. The attraction of investment to already concentrated areas tends to raise the marginal product of labour in these areas, thereby inducing in-migration (although migration may also be encouraged by adverse social and economic conditions in sending areas.) Growth of relatively skilled labour force, induced public overhead investment and other induced economic activities further enhance the attractiveness of such areas for private investment.

This cumulative process results in an ever-greater concentration of population and economic activity. However, it also entails numerous social costs, including congested streets, clogged intersections, inadequate parks and recreation facilities, slum neighbourhoods; and air, water and noise pollution. Despite these problems, growth may continue because external diseconomies are not internalized costs for private producers; or, if they are internalized, they are not sufficient to balance the external economies of agglomeration. It may be argued that persons can increase their welfare by moving into large urban regions so long as their marginal private gains in real income outweigh their own marginal increase in internalized diseconomies of agglomeration. But this does not imply an increase in social welfare in a Pareto-optimal sense, because such migration, by increasing concentration, results in greater diseconomies for previous residents. Some previous residents might then prefer to leave the area. This would occur when marginal private income loss from out-migration is less than the marginal welfare loss due to increased diseconomies. On the other hand, social and economic rigidities (habituation to neighbours, friends and surroundings, imperfect labour market information etc.) may cause many of these persons to refrain from moving; or they may move only if increased diseconomies cause welfare losses that are substantially greater than the costs of relocating. In many developing countries, low-income residents of primate cities simply may not have better alternatives elsewhere.

These rather abstract arguments do not mean that market forces and the nature of spatially related externalities will necessarily continue to generate growth in large urban agglomerations. It may be that a combination of large-city diseconomies, new technologies, improved transportation and communications systems and changing residential location preference patterns with greater emphasis on non-metropolitan amenities can promote "spontaneous" population decentralization. It is argued below that this in fact appears to be the case on the basis of evidence from some industrially developed countries.

For now, however, the discussion deals with the perceptions and assumptions on which public policies are based. And, as detailed elsewhere in this volume, a large and—at least until recently—growing number of Governments have felt that measures should be taken to check the growth of large urban areas.

Before further discussion, the question posed at the beginning of this paper needs to be raised again. The argument that some urban agglomerations may be too large does not in itself say anything positive with respect to the role of intermediate-sized cities. Nevertheless, the foregoing discussion does provide a rationale for population redistribution policies based on intermediate-sized cities; they are large enough to generate significant external economies of agglomeration yet they are not so large that these economies are outweighed by concomitant diseconomies of agglom-

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eration. More precisely, net positive externalities are greater in intermediate-sized cities than in large, congested agglomerations (where they may be negative though not necessarily so) or in smaller places (which almost by definition have few external economies of agglomeration). There is yet another argument against efforts to develop small towns and rural areas as counter-magnets to large cities. If the resources at the command of a development agency were to be sprinkled thinly over these areas, the funds allocated to any particular locality would be negligible. If, on the other hand, certain small towns were to be selected for truly large infusions of development funds, then the regional policy being pursued would in effect be based on an intermediate-sized city orientation. However, the economic rationale for this approach would be weak. It would be more efficient to invest scarce development resources in already existing intermediate-sized cities that to have an immediate capability to generate external economies of agglomeration. The only exceptions to this approach would be small towns or rural areas that possess unusual and unrealized opportunities for development, such as significant resources for energy production. But the "boom-town" phenomenon that typically characterizes the exploitation of these situations is often associated with severe social and growth management problems.

These remarks have been preliminary to more specific examinations of national experiences, for regional policies are generally made by national Governments.

Section A of this study deals with relatively industrialized countries in the following order: the United States of America; Sweden; Denmark; the United Kingdom of Great Britain and Northern Ireland; France; Hungary; Poland; the German Democratic Republic; the Union of Soviet Socialist Republics; Japan. Section B considers experiences of the developing countries.

A. Developed countries

United States of America

The United States of America has not adopted population redistribution policies as such, but major regional development legislation passed during the 1960s reflected the concerns of the time with respect to the magnitude and geographical location of the national population. It was widely assumed that the country as a whole would have to adjust to substantial population growth. Moreover, the decline of many small towns and rural areas was accompanied by net migration to standard metropolitan statistical areas. Non-metropolitan decline and net out-migration from the south were thought to be causing particular hardship in northern metropolitan areas. Nevertheless, there appeared to be no end in sight to the growth of the larger standard metropolitan statistical areas. In response to these perceptions, increasing pressure was brought to bear on Congress to do something to halt non-metropolitan decline and to curb the growth of the largest standard metropolitan statistical areas.[1]

Ever since the mid-1960s, the task of dealing with problems associated with changes in the human settlement system of the United States has been approached in terms of attempts to achieve more "balanced" spatial growth. In fact, this vague notion has at one time or another been used to promise something to communities at all levels of the urban hierarchy. For the most part, however, it has been a kind of code expression for using public policy to promote the development of non-metropolitan areas, especially those experiencing high levels of population out-migration and/or economic stagnation. Unlike some countries, the United States has avoided direct measures to curb the growth of large cities. Instead, it has implemented regional development programmes intended to improve economic opportunities in the hinterlands, thus indirectly reducing migration to large cities.

Regional development policy has been based primarily on two pieces of legislation: the Appalachian Regional Development Act of 1965; and the Public Works and Economic Development Act of 1965.

The Appalachian Regional Development Act established the Appalachian Regional Commission (ARC) for the purpose of co-ordinating a joint federal-state development effort—the largest such programme yet undertaken in the United States. The Appalachian programme involves 13 states—stretching from north-eastern Mississippi to southern New York—but the only whole state included is West Virginia. ARC was given specific programme and funding authority in nine functional areas, with the highway programme being the most significant in terms of resources. Through fiscal year 1978, ARC had spent $3.5 billion; its influence was also significant in bringing other federal funds to the Appalachian region.

Title V of the Public Works and Economic Development Act authorized the Secretary of Commerce to designate, with the co-operation of the states involved, multistate regions with common problems of economic distress or lag that could not be solved by measures taken within any one state. Once a region has been designated, the relevant states are invited to participate in a regional commission patterned in structure on that for Appalachia. During the 1970s, expansions of previously existing commissions and the creation of six new commissions have led to a situation where part or all of the contiguous 48 states now participate in the Appalachian and Title V programmes. However, the Title V commissions have spent only about $1 per capita annually in the relevant regions, whereas ARC

[1] United States of America, Advisory Committee of Intergovernmental Relations, *Urban and Rural America: Policies for Future Growth* (Washington, D.C., Government Printing Office, 1968); and John F. Kain and Joseph J. Persky, "The North's stake in southern rural poverty", in John F. Kain and John R. Meyer, eds., *Essays in Regional Economics* (Cambridge, Massachusetts, Harvard University Press, 1971), pp. 243–278.

has spent approximately $8 per capita, exclusive of the highway programme.[2]

In addition to the Title V commissions, the Public Works and Economic Development Act created the Economic Development Administration (EDA) to assist the commissions (a role it has never effectively assumed) and to provide assistance in its own right to areas characterized by chronic economic distress. EDA was given a wide range of programme tools, including grants and loans for public works and development facilities, industrial and commercial loans, and an extensive programme of technical, planning and research assistance. EDA has worked primarily through multicounty development districts, which need to prepare an Overall Economic Development Plan in order to qualify for development assistance. Between its inception and 1978, EDA spent about $3.4 billion on regional development activities, of which two thirds was allocated to public works projects.

Before commenting on the overall impact of these programmes, it is first necessary to identify the major changes that have taken place in the settlement system of the United States in recent years.

The data in table 11 indicate that between 1970 and 1975, the population growth rate in standard metropolitan statistical areas was 4.2 per cent, less than the corresponding non-metropolitan rate of 6.5 per cent. Although it is true that there has been net migration from the metropolitan areas as a whole to non-metropolitan areas during the past decade, this generalization masks more complex processes at work within the urban hierarchy and in interregional migration patterns. For example, between 1970 and 1975, standard metropolitan statistical areas with a population over 3 million experienced absolute population decline and those with over 2 million persons had net out-migration. However, every standard metropolitan statistical area population size-class below 2 million had a growth rate exceeding the national average; within this set only the 500,000–1 million size-class had a growth rate (5.7 per cent) lower than the 6.5 per cent non-metropolitan growth rate. Thus, with the exception of the larger metropolitan areas, metropolitan growth is still relatively vigorous.

The general picture is one of large-city decline in the north, widespread non-metropolitan revival and continuing rapid growth in small and medium-sized standard metropolitan statistical areas. The growth of the south—and to a somewhat lesser extent the west—is especially noteworthy. The south accounted for over 54 per cent of total national population increase between 1970 and 1975; and all levels of the southern urban hierarchy have participated in the overall regional boom.

The assumptions of the mid-1960s are also inconsistent with what is known today about the nature of interregional migration flows. Even in the 1960s southern white migrants to northern cities substantially improved their economic circumstances and relatively few were condemned to ghettos or became part of the urban unrest problem.[3] As for black migrants, whether one considers poverty status, earnings or total income, independent studies agree that southern-born blacks have been more economically successful in the north than northern-born blacks.[4] Moreover, recent evidence from the Current Population Survey of the Bureau of the Census indicates that the south is a net importer of poverty through the interregional migration process.[5]

One may ask to what extent the federal regional development programmes have been responsible for these changes. The non-metropolitan areas that have

[2] Benjamin Chinitz, "Regional economic development commissions: the Title V Program", *The Canadian Journal of Regional Science*, vol. 1, No. 2 (1978), pp. 107–127.

[3] Luther Tweeten and George L. Brinkman, eds., *Micropolitan Development: Theory and Practice of Greater-Rural Economic Development* (Ames, Iowa, Iowa State University Press, 1976), p. 92.

[4] Larry Long and Lynne Heltman, "Migration and income differences between black and white men in the North", *American Journal of Sociology*, vol. 80, No. 6 (May 1975), pp. 1391–1409.

[5] Niles Hansen, "Does the South have a stake in northern urban poverty?", *Southern Economic Journal*, vol. 45, No. 4 (1979), pp. 1220–1224.

TABLE 11. ESTIMATED POPULATION OF STANDARD METROPOLITAN STATISTICAL AREAS, BY POPULATION SIZE CLASS,[a] AS OF 1 JULY 1975

Size class	*Population as of 1 July 1975*[b]	*Population change, 1970–1975*		*Net migration, 1970–1975*	
		Number	*Percentage*	*Number*	*Percentage*
All standard metropolitan statistical areas (259)[c] ..	156 097 600	6 271 700	4.2	696 500	0.5
3,000,000 or more (7)	39 848 400	−360 000	−0.9	−1 536 900	−3.8
2,000,000 to 3,000,000 (8)	18 084 500	136 000	0.7	−462 500	−2.5
1,000,000 to 2,000,000 (20)	28 331 200	2 132 600	8.1	1 074 900	4.1
500,000 to 1,000,000 (37)	27 125 200	1 453 000	5.7	437 700	1.7
250,000 to 500,000 (63)	22 725 500	1 477 100	7.0	558 900	2.6
100,000 to 250,000 (97)	16 587 300	1 263 600	8.2	569 800	3.7
Under 100,000 (27)	2 495 600	169 500	7.3	54 700	2.4
Non-metropolitan areas	56 953 900	3 475 900	6.5	1 770 200	3.3

Source: United States Bureau of the Census, *Data Book for the White House Conference on Balanced National Growth and Economic Development* (Washington, D.C., Government Printing Office, 1978), p. 22.

[a] Population size class of 1970 for standard metropolitan statistical areas defined on 31 December 1975.

[b] Provisional data.

[c] Figures in parentheses are the number of standard metropolitan statistical areas in each category.

experienced economic and demographic growth in the past decade after relatively long periods of stagnation or decline tend to lie within territories covered by ARC, EDA and the five original Title V regional commissions. These federal initiatives have no doubt been a positive force in some places, by helping to induce growth or by orchestrating growth that has been taking place "spontaneously". However, few observers would go so far as to credit them with the major responsibility for non-metropolitan revival. The agencies involved have had too little money, too little time and little in the way of coherent and systematic strategies for development.

The regional development legislation of 1965 stated that funds should be placed in areas with significant growth potential. In response, ARC and EDA have designated regional growth centres but funds have not been sufficiently concentrated to implement a genuine growth-centre strategy. EDA in particular has tended to spread its outlays widely and thinly. The agency itself acknowledges that its experience "has clearly demonstrated that the piecemeal approach to project funding followed in the past will generally not result in a meaningful increase in the level of an area's economic activity", and that "its resources, even at the substantially increased levels sought, are inadequate to realize economic growth and stability in more than a handful of areas unless maximum use is made of other public and, particularly, of private investment".[6] A recent evaluation of the Title V commissions concludes that they all "have had difficulties producing plans—as well as plan revisions required by 1975 legislation—that are both acceptable and useful".[7] Lastly, it is noteworthy that not until 10 years after the original Appalachian Regional Development Act did Congress call upon ARC to develop a multistate regional development plan for Appalachia to guide ARC investments and to serve as a framework for the respective annual development plans of the states. This work is now in progress.

If federal regional development programmes have had only a very limited influence on recent regional and interregional changes in the United States of America, it is still possible that the combined effects of all federal programmes could have had significant unintended consequences in this regard. For example, it is reasonable to believe that general decentralization of population and economic activity has been facilitated by the completion of the Interstate Highway System. The economic difficulties experienced in many parts of the old industrial areas of the north-eastern and northern central regions have in fact frequently been blamed on the geographical incidence of federal taxes and expenditures. However, this contention has not been supported by the available evidence.[8]

It also has been argued that net migration to the south may have been only a temporary phenomenon; in this view, the severe economic recession that particularly affected the basic industries of the north caused many unemployed workers to return to their places of origin and caused potential migrants from the south at least to delay their moves.[9] This position increasingly appears to be inadequate as the evidence mounts that the interregional demographic and economic shifts of the 1970s reflect fundamental structural changes and that the new patterns are likely to persist in the foreseeable future.[10] It is noteworthy that similar patterns of change have been occurring in other industrially advanced countries, regardless of whether they have had strong or weak regional development policies. What appears to be taking place is the deconcentration of population and economic activity from large metropolitan areas in favour of small and medium-sized cities.

Sweden

In 1964, the Swedish Parliament adopted a comprehensive "active location policy" to stem population flows from relatively sparsely settled areas—especially in the northern two-thirds of the country—to the larger cities. Relocation allowances that had been paid to workers who moved from areas of high unemployment to communities where jobs were available were continued, but the emphasis was shifted to a policy of taking work to the workers. The means were a system of subsidies to promote industrialization of the north and a system of planning that would determine the settlement pattern for the entire country, with quantitative growth targets for every city in the urban hierarchy. At the top of the hierarchy were the three metropolitan areas whose growth was to be curtailed: Stockholm; Göteborg; and Malmö. Planning officials originally wanted to designate a relatively few alternative urban counter-magnets, but the strong political power of the counties prevented this

[6] United States of America, Department of Commerce, Economic Development Administration, "The development of a subnational economic development policy", in *The White House Conference on Balanced National Growth and Economic Development*, final report (Washington, D.C., Government Printing Office, 1978), appendix vol. 6, p. 68.

[7] Leonard U. Wilson, *State Strategies for Multistate Organizations* (Washington, D.C., Council of State Planning Agencies, 1977), p. 17.

[8] Clyde E. Browning, *The Geography of Federal Outlays*, Studies in Geography, No. 4 (Chapel Hill, University of North Carolina, Department of Geography, 1973); and George E. Peterson and Thomas Muller, "The regional impact of federal tax and spending policies", paper presented at the Conference on Alternatives to Confrontation, Austin, Texas, Lyndon B. Johnson School of Public Affairs, September 1977.

[9] John F. Kain, "Implications of declining metropolitan population on housing markets", in George Sternlieb and James W. Hughes, eds., *Post-Industrial America: Metropolitan Decline and Inter-regional Job Shifts* (New Brunswick, New Jersey, Rutgers University, Center for Urban Policy Research, 1975), pp. 221–227.

[10] United States of America, Ninety-fifth Congress, second session, Joint Economic Committee, *U.S. Long-Term Economic Growth Prospects: Entering a New Era* (Washington, D.C., Government Printing Office, 1978); and Daniel Garnick, "A reappraisal of the outlook for northern states and cities in the context of U.S. economic history", paper presented at the Second Annual Conference on the Economic Future of the Northeast States, Cambridge, Massachusetts, MIT-Harvard Joint Center for Urban Studies, 1978.

measure. Instead, every county was allowed to designate a "primary centre".[11] The 24 primary centres were considered to have most of the advantages of the three large metropolitan areas except for a wide range of choice in the labour market. To help correct this situation, measures were taken to promote the decentralization of government activities and of head offices of manufacturing firms to primary centres. Further down the urban hierarchy, 76 "regional centres" and 114 "municipal centres" were designated. The former were eligible for subsidies to private investment but the latter were regarded as having only modest service functions.[12]

Recent regional population change trends in Sweden have been consistent with the objectives of national policy. During the 1970s, Stockholm and Göteborg have been experiencing zero population growth. Although this surprised many members of the planning community, it should have been apparent from trends in the 1960s that a small change in place preferences could easily lead to no growth in the two largest urban regions in Sweden. Meanwhile, many small urban places in southern Sweden have had rapid population growth, especially where schools and easy access to sports and recreation are available. In both southern and central Sweden, high standards of private transportation have made it quite feasible to separate residences and work-places. Decentralization also has been encouraged by an increase in effective demand for single-family homes as compared with apartment dwellings. In the 1960s, ambitious plans were formulated for large and medium-sized city regions all over the country; ample space was provided for apartments and industrial uses. Because land near these cities was often not available for single-family units, many persons moved to small places a considerable distance away. Traditionally about 80 per cent of the people in Swedish cities have lived in apartments. In 1965, apartments accounted for 71 per cent of new dwelling units; by 1972, this figure was down to 64 per cent. Thus:

> "Journey to work distances of 40–50 kilometers are becoming rather common in the early 1970s even for medium sized cities. The green wave in Sweden is a move back to the small urban places, where land for homes is abundant and cheap, but so far it has not been a move back to the countryside, which held 80 percent of the population in 1880 but only 19 percent in 1970."[13]

Analyses of these recent patterns of change agree that regional policies probably have not played a major determining role because they have been too recent and are still too limited in application.[14] Although there appears to be mutual agreement that structural changes in the economy are of vital importance in explaining changes in population distribution, even the most rigorous economic analyst of urban development in Sweden argues that cultural and environmental factors must be included in a complete approach to planning human settlement systems.[15]

Denmark

In the post-war years, rapid technological progress increased agricultural productivity in Denmark but it also resulted in a decline in agricultural employment. Relatively high unemployment in rural areas induced substantial migration to urban areas, particularly to Copenhagen. In 1958, measures were taken to promote employment growth outside of the larger urban areas. In 1962, the policy was modified to stress assistance to export activities. However, it was not until 1967 that objective criteria were introduced for the formal delineation of development areas, so that assistance could be tailored to meet specific types of local problems. And it was not until 1974 that legislation was passed to provide comprehensive physical planning on both the national and regional levels.[16]

Prior to 1960, Copenhagen, other old towns and new urban settlements in Denmark had approximately the same population growth rates. In the period 1955-1960, Copenhagen accounted for about half of total national growth. In the early 1960s, this pattern of urbanization changed dramatically. Although the elements of the urban system are the same as at the beginning of the century, the population of the Copenhagen region is now declining absolutely, whereas growth in medium-sized and small towns has increased sharply. Were it not for a positive net gain from international migration the Copenhagen region would have declined even more in recent years. Changes in the distribution of population have been associated with a shift of manufacturing employment away from Copenhagen. Recent employment growth above the national average has taken place in towns of fewer than 100,000 inhabitants and in rural areas; the search for relatively low-wage labour has probably been the main reason for manufacturing decentralization. There is a generally increasing tendency for people in rural areas to adopt urban life-styles and urban sprawl has further blurred traditional notions of towns and cities.[17]

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[11] James L. Sundquist, *Dispersing Population: What America Can Learn from Europe* (Washington, D.C., The Brookings Institution, 1975).

[12] Åke E. Andersson, "Regional economic policy: problems, analysis, and political experiments in Sweden", in Niles M. Hansen, ed., *Public Policy and Regional Economic Development: The Experience of Nine Western Countries* (Cambridge, Massachusetts, Ballinger Press, 1974), pp. 215–216.

[13] Alexandersson and Thomas Falk, "Changes in the urban pattern of Sweden, 1960–70: the beginning of a return to small urban places?", *Geoforum*, vol. 18 (1974), p. 92.

[14] Organisation for Economic Co-operation and Development, *Regional Policies: The Current Outlook* (Paris, 1977), p. 50; and Thomas Falk, "Urban development in Sweden 1960-1975: population dispersal in progress", in Niles M. Hansen, ed., *Human Settlement Systems: International Perspectives on Structure, Change, and Public Policy* (Cambridge, Massachusetts, Ballinger Press, 1978), p. 75.

[15] A. E. Andersson, loc. cit., p. 233.

[16] Organisation for Economic Co-operation and Development, op. cit.

[17] Sven Illeris, "Urbanization in Denmark", *Geographia Polonica*, vol. 39 (1978), pp. 49–64.

Regional policies may have influenced decentralization tendencies in Denmark,[18] but given that effective co-ordinated spatial planning only began to be implemented in the 1970s it is also likely that recent urbanization and migration processes "might well have followed the paths they did even without any planning intervention".[19]

United Kingdom of Great Britain and Northern Ireland

The United Kingdom has not promoted the growth of particular urban centres as migration alternatives to London and to the south-eastern regions in general, but a variety of subsidies and other preferential treatment has been accorded to "development areas", with relatively high rates of unemployment and out-migration (wage subsidies, which were introduced in 1967, were phased out in 1977). Attempts also have been made to restrain industrial development in the south-eastern and Midlands regions, as well as office development in parts of the south-eastern region. However, concern about inner-city blight resulting from the suburbanization of jobs and people has brought about a reversal of policy with respect to office location in London.

In the United Kingdom, there are now more than 30 new towns at various stages of development. Their combined population is currently about 2 million. In addition, approximately 110 statutory town-expansion schemes have been agreed upon but only a small proportion have been completed.[20] The new-towns policy in the United Kingdom has been criticized for reinforcing existing regional trends by stressing the role of the towns in serving the overspill population of congested metropolitan areas or of expanding industrial sites. In other words, they have been instruments for accommodating growth rather than changing regional and interregional migration patterns.[21] Nevertheless, it also has been pointed out that although infrastructure investment, as in new towns, offers the prospect of increasing growth in assisted areas, it also runs the risks of failure, public waste and losses in efficiency if the policy-makers make poor locational choices.[22]

Although there has been considerable dispersion of population within the southern region, the population drift to the south has apparently not been curbed. During the decade from 1961 to 1971, Scotland lost 95 per cent of its natural increase; the north lost 62 per cent and the north-west 33 per cent. Yet there is widespread agreement that out-migration from these areas would have been even heavier if it were not for regional policies.

France

French political, economic, social and intellectual life has been extremely concentrated in Paris. Initial efforts to cope with this situation—which was dramatized after the Second World War in terms of Paris and a "French desert"[23]—consisted primarily of measures to limit the growth of Paris in the hope that greater decentralization of population and economic activity might thereby be achieved. These measures were largely ineffectual and it became apparent that decentralization would require positive measures in the provinces rather than mere negative restrictions in Paris.

During the 1960s, France was divided into 21 planning regions but the regions were not given the administrative and financial capacity to implement major programmes. Meanwhile, the Délégation à l'aménagement du territoire et à l'action régionale (DATAR), which was responsible for the co-ordination of regional planning activities at the national level, was initiating an urban policy to promote decentralization. To offset the pull of Paris, eight equilibrium metropolises were chosen for special development aid. These locations were selected on the basis of descriptive studies of the quantity and kinds of services offered in the principal cities of France, as well as studies of urban spheres of influence. In some instances, the metropolises were more broadly defined than single cities because polynuclear urban areas were beginning to form. The areas chosen were Lyon-St. Etienne, Marseilles-Aix, Bordeaux, Lille-Roubaix-Tourcoing, Toulouse, Strasbourg, Nantes-St. Nazaire and Nancy-Metz.[24]

However, a number of other urban growth strategies have also been adopted, resulting in a dilution of effort if not inconsistency concerning objectives. Five new towns have been created in the vicinity of Paris and still others have been located near such provincial cities as Lille, Rouen, Lyon and Marseilles. Each new town is expected to have between 300,000 and 500,000 inhabitants by the end of the century. As in the United Kingdom, the new towns are, for the most part, designed to accommodate metropolitan population overspill, though the provincial new towns may reinforce the growth of some equilibrium metropolises. In 1967, it was also decided that the development of regional centres in the Paris Basin should be encouraged, on the ground that their growth would be an effective deterrent to the growth of Paris. The designated cities, including Rouen, Le Havre, Caen, Le Mans, Tours, Orléans, Troyes, Reims and Amiens, are located within a radius of between 100 and 200 kilometres from Paris. Then in 1970 a new goal was announced: the

[18] Ibid.

[19] Christopher Elbo, "Denmark", in Hugh D. Clout, ed. *Regional Development in Western Europe* (London, John Wiley and Sons, 1975), p. 243.

[20] David Thomas, "United Kingdom", in Hugh D. Clout, ed., op. cit., pp. 191–210.

[21] Lloyd Rodwin, *Nations and Cities: A Comparison of Strategies for Urban Growth* (Boston, Houghton-Mifflin Co., 1970), p. 125.

[22] Harry W. Richardson, *Regional and Urban Economics* (Middlesex, England, Penguin Books, 1978), p. 264.

[23] J.-F. Gravier, *Paris et le désert francais: décentralisation, equipment, population* (Paris, Portulan, 1947).

[24] Niles M. Hansen, *French Regional Planning* (Bloomington, Indiana, Indiana University Press, 1968).

promotion of the growth of medium-sized towns—defined as those in the range from 50,000 to 200,000 population—throughout France. The rationale was that they were expanding relatively rapidly in any case and would be cheaper to develop than other cities. To complicate matters further, it was decided in the early 1970s that despite the dominance of Paris within the French context, the capital should be promoted as an international centre.

Before evaluating these approaches, it is instructive to consider the recent evolution of the French settlement system. Between 1968 and 1975, the city of Paris experienced an absolute decline of 290,941 inhabitants and net out-migration of 355,825 persons; the average annual rate of net out-migration during this period was 2.08 per cent. However, net in-migration to other departments of the Île-de-France (the greater Paris region) was so high that, taken as a whole, the population of the Île-de-France grew by 6.8 per cent, with an average annual net in-migration rate of 0.17 per cent. Neighbouring departments in the Paris Basin also had relatively high rates of net in-migration. For example, the five departments comprising the Centre planning region had an average annual net in-migration rate of 0.63 per cent, which exceeded the corresponding figure for all of the other planning regions except the highly attractive Provence-Alpes-Côte d'Azur region, where the rate was 1.30 per cent.[25]

In the west, three contiguous regions that had experienced net out-migration between 1962 and 1968 had net in-migration during the period 1968-1975. The average annual net migration rate rose from −0.7 per cent to 0.18 per cent in Pays de la Loire; from −0.09 per cent to 0.23 per cent in Brittany (a remarkable reversal in a region known for generations as an exporter of people); and from −0.22 per cent to 0.02 per cent in Poitou-Charentes. These areas have in fact been favoured by French regional policy since the mid-1960s.

There can be no doubt that in terms of the economic and demographic objectives of French spatial planning (*aménagement du territoire*) positive results have been achieved. In 1955, the Paris region accounted for 33 per cent of all new French industrial construction permits; by 1975, the corresponding figure was only 7.5 per cent. Industrial employment in the Paris region decreased by 35,000 workers between 1969 and 1974.[26] Moreover, out-migration from the poorer regions has been slowed or reversed and regional per capita income differentials have not increased and probably have decreased.[27] Yet, despite these successes, the overall picture is not quite so favourable.

There has indeed been significant industrial growth in the provinces, but it has taken place primarily in areas that are close to the Paris region and in areas that have not benefited from eligibility for decentralization subsidies. More generally, it has been demonstrated that industrial location decisions bear no relation to the incentives provided by the Government. For example, a major survey carried out in 1975 revealed that of 788 firms involved in decentralization operations, only 30 made any mention of regional development subsidies as a factor in location decision-making. Other relevant surveys have yielded similar results. Moreover, for every manufacturing job lost in the Paris region between 1969 and 1974, 10 new jobs were added in the tertiary sector. During this period, 42 per cent of the total national land surface devoted to new office construction was accounted for by the Paris region. Technical, professional and managerial employment increased so much in the Paris region that, in a functional sense, the primacy of Paris increased rather than decreased. Gains in industrial employment in the provinces, on the other hand, were mainly in low-wage, slow-growth sectors utilizing primarily women, immigrants, new entrants to the labour force and redundant agricultural labour. Thus, the evolution of the settlement system in France has for the most part been related to market forces and to technological changes that have accentuated the spatial division of labour and downgraded jobs connected with mass production. Regional and urban policies have essentially been after-the-fact measures intended to correct some of the socially undesirable consequences of the market economy.[28] If they have had some measure of success in this respect, the fact remains that they are not the principal force guiding decentralization.

Hungary

The dominance of Budapest within the Hungarian urban system has been so great that Hungary has the highest degree of primacy of any European country.[29] Hungarian planners have perceived that excessive numbers of workers have had to commute over long distances to Budapest and that there is a marked absence of medium-sized urban centres in the Great Plain and north-eastern regions, which has given rise to serious difficulties with respect to service delivery.[30] Planning objectives addressing these issues were set forth in 1967 and 1971. They included: curbs on the growth of Budapest; promotion of the growth of provincial and smaller urban centres, especially in less developed areas; and reducing out-migration from the less developed areas. It was hoped that a more bal-

[25] Institut national de la statistique et des études économiques, *Annuaire statistique de la France 1977* (Paris, 1977).

[26] Philippe Aydalot, "L'aménagement du territoire en France: une tentative de bilan", *L'espace géographique*, vol. 7, No. 4 (1978), pp. 245–253.

[27] Rémy Prud'homme, "Regional economic policy in France", in Niles M. Hansen, ed., *Public Policy and Regional Economic Development: The Experience of Nine Western Countries*, pp. 33–64.

[28] P. Aydalot, loc. cit.

[29] John M. Wardwell, "International manifestations and implications of the urban-rural migration turnaround", Bozeman, Montana, Center for Social Data Analysis, 1978 (unpublished paper).

[30] George J. Demko and Roland J. Fuchs, "Demography and urban and regional planning in northeastern Europe", in Huey L. Kostanick, ed., *Population and Migration Trends in Eastern Europe* (Boulder, Colorado, Westview Press, 1977), pp. 49–80.

anced urban hierarchy could be realized by the year 2000. Housing policies, industrial location policies and preferential state subsidies were directed towards those ends.[31]

Although it would be premature to make definitive evaluations of settlement system policies in Hungary, the evidence available is encouraging. Between 1971 and 1975, for example, there were no major interregional population shifts. The annual rate of net migration gain at Budapest dropped from 0.97 per cent in 1971 to 0.24 per cent in 1975. Meanwhile, whereas seven counties had experienced absolute population declines between 1960 and 1970, this was the case for only one county during the period 1971-1975. The growth of the larger urban areas is no longer dependent upon industry. Nationally, the great bulk of new entrants to the labour force went into the tertiary sector; total industrial employment increased by only 1 per cent. Industrial employment at Budapest diminished by 120,000 persons between 1965 and 1975 but it increased relatively rapidly in the Hungarian Plain and South Transdanubia. Thus, the share of national industrial employment in the less industrialized regions rose from 18.5 per cent to 21.0 per cent between 1970 and 1975, while at Budapest the corresponding proportions fell from 40.1 per cent to only 31.5 per cent. Moreover, throughout the country the highest rates of population growth were registered by medium-sized cities. It is noteworthy that two thirds of the Government's central fund for territorial development was allocated to regions of the Hungarian Plain. However, it should also be pointed out that under the Hungarian system of management, industrial enterprises make independent decisions in development-related matters. And many enterprises have located factories in the Hungarian Plain because it has been easier to find available workers there than at Budapest. Hungarian scholars have suggested that the pace of decentralization will probably slacken in the near future. Nevertheless, efforts to bring about a more balanced system of cities will continue to receive active government support.[32]

Poland

In relation to other European countries, the problem of primacy is not very important in Poland. The Warsaw agglomeration accounts for only 5 per cent of the total Polish population and this share is not expected to increase significantly in the foreseeable future. Moreover, several strong provincial centres perform many of the same functions as the capital. In the 1950s, local rates of population growth were highly correlated with the rate of industrial development.

During the 1960s, "deglomeration" policies were pursued in order to check the growth of the largest cities. The rationale was that per capita investment and operating costs were too high in large cities. By 1970, it had become clear that this approach was having some adverse effects, including an aging population structure and labour shortages in the largest urban centres (especially Warsaw and Lódź); longer journeys to work; and rapid, unanticipated suburban growth near large cities, which put severe pressure on local housing and service capacities. In 1974, a new plan was approved to guide the development of the Polish urban system to the year 1990. The highest target growth rates were given to medium-sized cities in order to take advantage of scale and agglomeration economies while stimulating migration over relatively short distances.[33] Data that would permit an evaluation of this recent strategy are not yet available.

German Democratic Republic

In the German Democratic Republic, the national population has stabilized at about 17 million persons. On the whole, large and medium-sized cities have somewhat increased their share of the total population whereas small towns have shown small negative net migration balances. However, interregional migration has been decreasing and is currently not very significant. Unlike other European countries, there has been virtually no suburbanization in the German Democratic Republic. Current and future plans will emphasize housing construction in large and medium-sized cities and in selected rural communities. Considerable attention is devoted to the provision of a wide range of services from central places, with special consideration being given to the lightly settled agricultural north.[34]

Union of Soviet Socialist Republics

Despite the ravages of the Second World War, the Soviet Union has been transformed from an essentially rural society into a modern, largely urbanized country. In 1926, the national population was 82 per cent rural; but by 1974, it was 60 per cent urban. Currently, the Soviet Union has roughly the same number of cities with over 100,000 population as the United States of America. Thirteen cities have populations in excess of 1 million and approximately 10 others could easily reach this level in the near future.

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[31] Ibid.; and George J. Demko, Roland J. Fuchs and Thomas J. Camarco, "Population redistribution policies in Hungary and an assessment of their effectiveness", Columbus, Ohio, Ohio State University, Department of Geography (unpublished paper).

[32] László Lackó, György Enyedi and György Köszegfalvi, *Functional Urban Regions in Hungary* (Laxenburg, Austria, International Institute for Applied Systems Analysis, 1978).

[33] Piotr Korcelli, "Aspects of Polish national urban policy", in Harry Swain, ed., *National Settlement Strategies: East and West* (Laxenburg, Austria, International Institute for Applied Systems Analysis, 1975), pp. 49–63.

[34] Frankdieter Grimm and others, "Aspects of urbanization in the German Democratic Republic", in Harry Swain, ed., op. cit., pp. 74–85; and Heinz Lüdemann and Joachim Heinzmann, "On the settlement system of the German Democratic Republic: development trends and strategies", in Niles M. Hansen, ed., *Human Settlement Systems: International Perspectives on Structure, Change, and Public Policy*, pp. 121–143.

During the 1960s, considerable work was done in the Soviet Union on the relationship between city size and per capita costs of providing services and maintaining a healthy environment. The greatest net scale and agglomeration economies were found in cities in the range from 50,000 to 400,000 population; beyond this range, significant diseconomies were encountered in the public-services sector. Thus, there was a high level of interest in limiting the growth of large cities and in developing smaller urban places. Those policies were also consistent with the long-standing general objective of reducing social and economic differences among cities and rural areas. However, in the early 1970s, Perevedentsev and other Soviet economists argued that the economically optimal city is not that which requires the smallest per capita investment but rather the city that maximizes the difference between per capita expenditures and output. Therefore, in the perspective of national efficiency, there were economic advantages to concentrating people and production in the largest cities.[35]

In fact, as the data in table 12 indicate, there has been increasing concentration of the urban population. Moreover, during the early 1970s, Moscow, Kiev, Tashkent, Minsk and Odessa continued to grow at an accelerated pace. The absolute annual increase in population in large cities between 1970 and 1974 was from 10 to 20 per cent higher than the increase in the 1960s.[36] The principal reason for this phenomenon appears to be the dominance of industrial-sectoral planning over territorial planning. Although the current five-year plan (1976-1980) calls for limiting the growth of large cities by means of investment in small and medium-sized cities, the production interests of the ministries argue that the industrialization objective can best be achieved by location in large cities, where scale and agglomeration economies can most readily be garnered. If they are to be made more attractive to industry, small and medium-sized cities will need to be provided with more economic and social infrastructure as well as improved accessibility within the national transportation system. Otherwise, official decrees will have only limited results. Nevertheless, it should be pointed out that problems of large-city growth would probably have been more severe in the absence of central control over the location of industry.[37]

Japan

The general situation in post-war Japan has been one of increasing population concentration into the two largest metropolitan areas, the capital region and the Kinki region, which have Tokyo and Osaka as their respective centres. Within these regions, the growth rates of prefectures often exceeded 6 per cent per annum. During the 1950s, the Tokyo prefecture was the most rapidly growing, but since then surrounding prefectures in the capital region have grown more rapidly. The share of the national population accounted for by the capital region increased from 15.7 per cent in 1950 to 23.3 per cent in 1970. The share of the Kinki region went from 8.6 per cent in 1950 to 11.8 per cent in 1970. In contrast, most prefectures in the north-eastern and western regions have had declining shares of the national population.[38]

It should be mentioned that migration flows favouring non-metropolitan areas probably began in the early 1960s: the increase in population share of the capital and Kinki regions between 1960 and 1970 was largely due to the age selectivity of in-migrants to these regions; they tended to be young adults with relatively high fertility rates. Thus, the pattern of national popu-

[35] R. G. Jensen, "Urban environments in the United States and the Soviet Union: some contrasts and comparisons", in Brian J. L. Berry, ed., *Urbanization and Counterurbanization* (Beverly Hills, California, Sage Publications, 1976), pp. 28–40.

[36] A. Kochetkov, "The socioeconomic aspects of urban development", *The Current Digest of the Soviet Press*, vol. 28, No. 2 (1976), p. 7.

[37] George A. Huzinec, "The impact of industrial decision-making upon the Soviet urban hierarchy", *Urban Studies*, vol. 15, No. 2 (June 1978), pp. 139–148.

[38] Koichi Mera, "Population concentration and regional income disparities: a comparison analysis of Japan and Korea", in Niles M. Hansen, ed., *Human Settlement Systems: International Perspectives on Structure, Change, and Public Policy*, pp. 155–175.

TABLE 12. UNION OF SOVIET SOCIALIST REPUBLICS: POPULATION BY CITY-SIZE CATEGORY, SELECTED YEARS, 1926–1974

	Number of inhabitants and percentage distribution[a] *(millions)*				
City-size category	*1926*	*1939*	*1959*	*1970*	*1974*
Under 3,000	1.2 (4.6)	0.9 (1.5)	1.6 (1.6)	2.1 (1:5)	2.1 (1.4)
3,000–5,000	1.3 (4.9)	2.1 (3.5)	3.6 (3.6)	4.1 (3.0)	4.1 (2.7)
5,000–10,000	2.7 (10.3)	5.3 (8.8)	9.2 (9.2)	10.0 (7.4)	10.6 (7.1)
10,000–20,000	3.5 (13.3)	6.9 (11.4)	11.2 (11.2)	12.7 (9.3)	13.6 (9.1)
20,000–50,000	4.0 (15.2)	9.7 (16.0)	14.8 (14.8)	18.5 (13.6)	19.1 (12.8)
50,000–100,000	4.1 (15.6)	7.0 (11.6)	11.0 (11.0)	13.0 (9.6)	14.7 (9.8)
100,000–500,000	5.4 (20.5)	15.7 (26.0)	24.4 (24.4)	38.3 (28.2)	43.7 (29.2)
Over 500,000	4.1 (15.6)	12.8 (21.2)	24.2 (24.2)	37.3 (27.4)	41.7 (27.9)
TOTAL	26.3 (100)	60.4 (100)	100.0 (100)	136.0 (100)	149.6 (100)

Source: George A. Huzinec, "The impact of industrial decision-making upon the Soviet urban hierarchy", *Urban Studies*, vol. 15, No. 2 (June 1978), p. 140.

[a] Percentage distribution given in parentheses.

lation distribution has changed more slowly than inter-regional migration patterns would suggest.[39]

The 1975 census reveals a more complicated pattern of change in the Japanese settlement system. Non-metropolitan areas continued to decline in relation to metropolitan areas between 1970 and 1975; 86 per cent of total national population growth during that period occurred in metropolitan areas. In heavily populated regions consisting of contiguous metropolitan areas the core areas grew relatively slowly, and the central cities of Tokyo and Osaka actually lost population. However, in many smaller metropolitan areas there was an increase of population concentration in the central cities. In general, the most rapidly growing areas were middle-sized metropolitan areas.[40] More recent data indicate that the century-long movement of population to the Pacific coast of central Honshu may have come to an end in the 1970s. In 1970, these regions experienced net in-migration of 430,000 persons; in 1976, the corresponding figure was only 9,000 persons. Furthermore, "it is not only the peripheral regions on either side of the Pacific regions of central Honshu that are experiencing a corresponding rise in net migration, but the peripheral islands as well. Thus, the decline in net migration into the regions of central Honshu cannot be dismissed simply as a further extension of these regions to either end of Honshu."[41]

The evidence suggests that if current trends continue, the settlement system in Japan will be increasingly similar to those of the industrially advanced western countries. Although the Government of Japan did adopt a decentralization policy in the 1960s, including the promotion of growth poles, the measures taken had only a negligible impact. The high rate of post-war migration to large cities occurred mainly because of greater employment opportunities in industrial regions. The slowing and, in some instances, the reversal of post-war migration trends have been associated with reduced income differentials between rich and poor regions, which can be explained in part by government taxation and expenditure programmes that on balance have favoured poor regions. It is likely that slower economic growth, environmental factors and changing cultural values have also affected migration decisions, but the mechanisms involved are not yet well understood.[42]

B. Developing countries

The primate cities of developing countries have high underemployment and unemployment rates, crowded squatter settlements, and myriad related difficulties. However, in most of these countries, glaring economic and social disparities between primate cities and most of the remaining areas—which tend to be even poorer—represent an even greater problem. Even in developing countries not characterized by primacy, such as Brazil, India and Pakistan, the sheer size of large metropolitan areas gives rise to critical urban management challenges. Regional policies designed to reduce urban-rural disparities have typically incorporated one or another variant of the growth-pole strategy. Induced growth centres have been viewed as counter-magnets to divert migrants from large cities and as generators of beneficial spread effects to their surrounding hinterlands. They also have increasingly been viewed in the context of the urban system of a country—or its lack of a system. Thus, if most of the developed countries appear to have an orderly hierarchy of central places through which development-inducing innovations filter and spread, then this spatial structure should, it has been argued, also be created in the developing countries. As one observer puts it:

> "It is not that the underdeveloped regions lack central places, for some have too many! What is amiss is that they rarely constitute a functional hierarchy, and for this reason they fail to provide an intermeshed system of exchange that will provide the requisite incentives for increased application of labor, capital, and human skills".[43]

Apart from their role in the national hierarchy, intermediate cities can provide an impetus to social and economic transformation by functioning as regional industrial and commercial centres and as locations for decentralized transportation, marketing, educational, service and government functions.[44]

The question arises whether growth-pole strategies have worked in the developing countries; more specifically, whether they have produced beneficial spread effects, or changed migration patterns or reduced regional income disparities. Before considering these questions, a word of caution is in order. Positive results cannot be expected from policies that have in fact not had much real content in terms of relevant programmes and projects or from programmes that have had too little time to yield results. The growth-pole literature frequently deals with these types of situations rather than cases representing real tests of growth-pole strategies. For example, a recent book on regional development planning in Asia—and particu-

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[39] Ayşe Gedik, "Spatial distribution of population in postwar Japan (1945-1975) and implications for developing countries", Discussion paper 78–14, University of Tsukuba, Ibaraki, Japan, 1978.

[40] Norman J. Glickman, *Growth and Change in the Japanese Urban System: The Experience of the 1970s* (Laxenburg, Austria, International Institute for Applied Systems Analysis, 1977); and Tatsuhiko Kawashima, "Recent urban evolution processes in Japan: analysis of functional urban regions", paper presented at the North American Meetings of the Regional Science Association, Chicago, Illinois, 1978.

[41] Daniel R. Vining, Jr. and Thomas Kontuly, "Population dispersal from major metropolitan regions: an international comparison", *International Regional Science Review*, vol. 3, No. 1 (1978), p. 52.

[42] Norman J. Glickman, *The Management of the Japanese Urban System: Regional Development and Regional Planning in Postwar Japan* (Laxenburg, Austria, International Institute for Applied Systems Analysis, 1977).

[43] E. A. J. Johnson, *The Organization of Space in Developing Countries* (Cambridge, Massachusetts, Harvard University Press, 1970), pp. 70–71.

[44] Dennis A. Rondinelli and Kenneth Ruddle, *Urbanization and Rural Development: A Spatial Policy for Equitable Growth* (New York, Praeger, 1978).

larly in Indonesia, Malaysia, the Philippines and Thailand—concludes that it is "not completely accurate to talk of the experience in Eastern South Asia in the adoption of the growth-pole approach. For at this moment the strategy has only entered the language rather than the substance of regional development in each of the four countries."[45] It has been argued that after experimenting with growth-centre strategies in the middle and late 1960s, Bolivia, Chile and Colombia rejected this approach for a variety of ideological, theoretical, political and practical reasons.[46] However, none of these countries had any sustained commitment to growth-centre programmes and each tended to abandon regional planning as a whole, not just growth-centre strategies. Iran, Kenya and the United Republic of Tanzania have embarked on ambitious growth-centre programmes, but it is still too soon to evaluate their effectiveness.[47] These and similar examples point up the fact that generalizations concerning the effectiveness of growth-pole strategies often are based on cases that do not represent true tests of the theory. On the other hand, the examples of Ankara and Brasilia indicate that given the political will it is possible to create major cities through public policy. It is clear that what is most lacking in current versions of growth-pole theory is explicit treatment of the nature and significance of socio-political factors that promote or impede the implementation of specific growth-pole strategies.

Even where there has been some measure of success in promoting growth centres, their spread effects have tended to be disappointing. A review of 17 studies of attempts to implement growth-centre strategies concludes that if a trend was discernible, it was that spread effects were smaller than expected, limited in geographical extent or less than concomitant adverse effects.[48] Another review likewise finds that scarcely any case exists where the strategy has been implemented in which the "spread effects imputed to growth centre development have been demonstrated to operate in reality. Indeed, the situation has appeared to be the contrary."[49] These findings appear to hold even among the more advanced developing countries. Brasilia, for example, has been dismissed as a costly and whimsical undertaking without regional development benefits,[50] although others have taken a more charitable view.[51] In 1971, Mexico introduced a number of regional planning measures consistent with a growth-centre strategy.[52] However, the urban centres in Mexico have not been associated with the spread of development to their hinterlands and even places that are relatively close to major cities are often as poor as places much farther away.[53] The Republic of Korea adopted a growth-pole approach to decentralize heavy and semi-heavy industries away from the Seoul region, but these industrial cities and industrial complexes in the southern coastal area do not have close relationships with rural hinterlands in terms of trade or employment and they have had little impact on rural income distribution. The southern coastal growth poles have more interactions with Seoul and with foreign countries than with their own hinterlands.[54] The overwhelming evidence concerning the lack of spread effects from growth centres to their hinterlands should probably come as no surprise in view of similar findings in developed countries,[55] where presumably the national settlement systems are more highly integrated.

It should be pointed out that even if migration streams were to be diverted to induced growth centres, this movement would not necessarily imply that the poorest groups in society would receive significant benefits. Growth-centre investments based on efficiency criteria may make provincial élites the principal beneficiaries of local growth.[56] Just as the absence of spread effects may increase intraregional per capita income disparities, so efficiency oriented programmes that rely on "trickle-down" effects to help the poor within growth centres may prove ineffective in creating greater equity.[57]

Some writers suggest that, apart from deliberate

[45] Kamal Salih and others, "Decentralization policy, growth pole approach, and resource frontier development: a synthesis of the response in four Southeast Asian countries", in Fu-chen Lo and Kamal Salih, eds., *Growth Pole Strategy and Regional Development Policy: Asian Experiences and Alternative Approaches*, published for the United Nations Centre for Regional Development (New York, Oxford by Pergamon Press, 1978), p. 79.

[46] Michael E. Conroy, "On the rejection of 'growth center' strategy in Latin American regional development planning", *Land Economics*, vol. 49, No. 4 (November 1973), pp. 371–380.

[47] Jaya Appalraju and Michael Safier, "Growth centre strategies in less-developed countries", in Alan Gilbert, ed., *Development Planning and Spatial Structure* (London, John Wiley and Sons, 1976), pp. 143–167.

[48] Gary L. Gaile, "Notes on the concept of 'spread' ", Los Angeles, California, University of California, Department of Geography, 1973 (unpublished paper).

[49] Fu-chen Lo and Kamal Salih, "Introduction", in Fu-chen Lo and K. Salih, eds., op. cit., p. xiii.

[50] Martin T. Katzman, *Cities and Frontiers in Brazil: Regional Dimensions of Economic Development* (Cambridge, Massachusetts, Harvard University Press, 1977), p. 217.

[51] Harry W. Richardson and Margaret Richardson, "The relevance of growth center strategies to Latin America", *Economic Geography*, vol. 51, No. 2 (April 1975), pp. 163–178.

[52] Ibid., p. 174.

[53] Ian Scott, with Douglas Keare, *Spatial Development in Mexico* (Washington, D.C., World Bank, 1977), vol. I, p. 25.

[54] An-Jae Kim, "Industrialization and growth pole development in Korea: a case study of the Ulsan industrial complex", in Fu-chen Lo and K. Salih, eds., op. cit., pp. 53–77.

[55] Allan Pred, *The Interurban Transmission of Growth in Advanced Economies: Empirical Findings versus Regional Planning Assumptions* (Laxenburg, Austria, International Institute for Applied Systems Analysis, 1976); and Rodney A. Erickson, "The spatial pattern of income generation in lead firm, growth area linkage systems", *Economic Geography*, vol. 51, No. 1 (January 1975), pp. 17–26.

[56] Joan M. Nelson, "Population redistribution policies and migrants' choices", revised version of paper presented to the Seminar on New Conceptual Approaches to Migration in the Context of Urbanization, organized by the Committee on Urbanization and Population Redistribution of the International Union for the Scientific Study of Population, Bellagio, Italy, 30 June–4 July 1978, p. 7.

[57] Gary L. Gaile, "Processes affecting the spatial pattern of rural-urban development in Kenya", *African Studies Review*, vol. 19, No. 3 (1976), pp. 1–16; and Alan G. Gilbert and David E. Goodman, "Regional income disparities and economic development: a critique", in Alan Gilbert, ed., op. cit., pp. 113–141.

policies to promote the growth of intermediate-sized cities, there are mechanisms that will eventually reduce primacy and regional income disparities. Empirical evidence exists that primacy tends to evolve according to the level of development of a country. In the early phase of development, non-agricultural functions and population centralize and concentrate in cities. In the system of cities this process shifts from the local to the regional and then to the national scale, intensifying regional inequalities. Eventually, however, interregional growth patterns become more balanced through the growth of less developed regions and their urban centres. Improvements in transportation and communications, the increasingly footloose nature of industrial location decisions, diseconomies of agglomeration in the largest cities and changes in values and preferences bring about interregional decentralization and intraregional dispersion, so that there is a steady decrease in primacy.[58] To the extent that this paradigm is correct—and many countries deviate from the norm—development policies based on intermediate-sized cities may be justified as means for accelerating the movement towards decentralization and dispersion. Unfortunately, there are virtually no rules to guide policy-makers in deciding whether, how, where, when or to what extent decentralization should be given a push.[59]

A similar argument has been advanced with respect to regional disparities in per capita income; that is, increasing disparities are typical of early development phases, whereas regional convergence is typical of the more mature phases of development.[60] This well-known Williamson thesis at times has been naïvely accepted as an automatic mechanism. It has also received some convincing recent empirical support on the basis of data from Japan and the Republic of Korea.[61] On the whole, however, it has not held up well in the light of evidence from the developing countries. This should not be surprising in view of deficiencies in the original study. It contained relatively few developing countries, the income concepts were not the same for each country, the measures used were sensitive to variations in the size and number of the administrative areas comprising the units of observation and the basic income data were not always reliable. An analysis of more recent cross-sectional data for regional per capita income differentials in 15 developing countries shows no consistent association between levels of regional income inequality and economic development level.[62] Lastly, defenders of the Williamson thesis have never provided an explanation of the spatial processes that would bring about convergence. However, it is pertinent in the present context that Williamson rejected population redistribution as a significant factor in income equalization and this contention has not been disputed.

It is likely that efficiency and equity are interrelated and therefore should not be treated as independent policy goals. Current regional econometric models use exogenous national income forecasts from national econometric models to run the regional sectors. The regional model is thus merely an appendage of the national model. In reality, differing regional distributions lead to differing levels of national output, which suggests a misspecification in current regional econometric model-building. A more correct specification would simultaneously model the country as a sum of its regions, thereby capturing regional feedbacks on the country. This approach would clearly aid policy analysis with respect to income redistribution among regions.[63] However, given the current state of the art, it is still not clear that econometric models can or will yield policy-relevant insights into the specifically spatial dynamics of human settlement systems. In any case, there is increasing recognition that analyses that merely relate regional per capita income disparities to national levels of per capita income are inadequate; regional disparities in developing countries need to be examined in relation to their historically inherited spatial structures and the nature of development processes.[64]

In retrospect, it appears that prevailing attitudes towards regional development policies based on intermediate-sized cities have passed through three phases. First, during the late 1950s and the 1960s there was considerable optimism with respect to the possibilities for inducing growth in a few centres and with respect to the subsequent generation of spread effects. Secondly, during the 1970s pessimism increased when the expectations of the first phase failed to materialize. More recently, there has been a tendency towards a more balanced view. If growth-centre policies have usually ended in failure it may be due less to deficiencies in growth-centre theory than to improper applications of the theory. Thus, pessimism does not necessarily imply that the principle of polarization is wrong. "On the contrary, it reflects the over-optimism and short-run time horizon of regional policymakers, the failure of sustained political will, the use of deficient investment criteria, bad locational choices, and lack of imagination in devising appropriate policy instruments."[65] Moreover, the problem is not simply that investments have been too few and too dispersed or that planners' time horizons have been unrealistically

[58] Salah El-Shakhs, "Development, primacy, and systems of cities", *Journal of Developing Areas*, vol. 7, No. 1 (October 1972), pp. 11–35.

[59] Harry W. Richardson, "City size and national spatial strategies in developing countries", World Bank Staff Working Paper No. 252, Washington, D.C., 1977 (mimeographed).

[60] Jeffrey G. Williamson, "Regional inequality and the process of national development: a description of the patterns", *Economic Development and Cultural Change*, vol. XIII, No. 1, part II (July 1965), pp. 3–45.

[61] K. Mera, loc. cit.

[62] A. G. Gilbert and D. E. Goodman, loc. cit.

[63] Stephen P. Coelen, "Regional income convergence-divergence again", *Journal of Regional Science*, vol. 18, No. 3 (December 1978), pp. 447–457.

[64] Madhavi Majmudar, "Regional disparities in India: 1950-51 to 1967-68", *Urban Studies*, vol. 15, No. 3 (November 1978), pp. 343–349.

[65] H. W. Richardson and M. Richardson, loc. cit., p. 169.

short. Rather, the fundamental issue is broader in scope, namely, the need to embed growth-centre strategies within more comprehensive development schemes which take account of political, social and institutional changes as well as explicit and implicit sectoral policies.

Thus, while developing countries need to create functional economic areas around growth centres, they also need adequate health and education facilities and a social milieu that will promote entrepreneurship even at the lower rungs of the urban hierarchy. In many countries, the efficacy of population redistribution policies would be enhanced by measures to slow the rate of national population growth. Moreover, transportation and communications policies should provide for linkages among functional economic areas; this would not only encourage more general spatial diffusion of agricultural and other innovations but would facilitate the movement of agricultural and light-industry outputs from rural areas to large urban markets.

Unfortunately, in drawing up lists of things for developing countries to do it is sometimes forgotten that they do not normally have the resources to undertake all of the planning, implementing, co-ordinating and integrating that well-meaning planners propose. The attractiveness of the growth-pole approach resides mainly in the notion of the concentration of scarce resources so that scale and agglomeration economies can be realized. Attempts to add too many other policy considerations to growth-pole strategies may only dilute the total effort to the point where no policy or strategy has any realistic hope of success.

What can be accomplished will vary from country to country but in each case decisions concerning the timing and location of growth-centre investments are crucial. With respect to the timing issue, it has been argued that a growth-centre development strategy requires a relatively high proportion of infrastructure investment and a correspondingly lower share in industry. Especially in the early phases of development, the social rate of return from infrastructure investment is likely to be lower than the market rate of return from industrial investment; and, in this sense, policy intervention may be premature. On the other hand, in later phases of development, the urban system may tend to become relatively fixed and difficult to alter. Thus, the costs of belated intervention may also be relatively heavy. And even if intervention is timed appropriately, it is important to balance investments in infrastructure and in industrial development.[66] But this may be easier said than done because Governments have limited leverage on private investments. Most government investment incentives to promote growth centres focus on national and international firms, in the hope that branch plants will be established in the designated centres. However, in the context of developing countries, large firms usually depend a great deal upon the agglomeration economies of large cities even for ancillary activities. And medium-sized firms—those employing between 50 and 500 workers—seldom establish branch plants. Also, in developing countries, large and medium-sized firms employ a smaller share of the labour force than is the case in more developed countries. On the other hand, decentralization incentives have little relevance to the small-scale informal-sector enterprises that typically provide the bulk of urban employment. Local small-scale enterprises may benefit from the location of larger firms in designated growth centres; but this would be a derivative effect of government policy, the success of which is not guaranteed in the first place.[67]

The location of migration counter-magnets would not appear to be highly restricted "provided that they are not too near the primate city to reinforce the long-run dominance of the core region".[68] But here again the issue is not so simple, especially when the complexities of actual migration processes are taken into account. The development of provincial growth centres could actually increase migration to primate cities. This would be the case to the extent that more rural migrants are attracted to the provincial growth centre than there are jobs available; that relatively labour-intensive local artisans and firms are driven out of business by modernization investment in the growth centre; and that transportation linkages between the growth center and the primate city are improved. Such considerations have led to the suggestion that satellite cities be created in the vicinity of primate cities. The satellites would benefit from external economies arising from proximity to large cities and migrants attracted to the satellites would be unlikely to move again to distant provincial cities. In this view, both "immediately and in the longer run, the satellite city option is likely to be more effective in diverting migration from the metropolis".[69] Yet, evidence also exists that the effectiveness of counter-magnets appears to decline in proximity to primate cities.[70] And even if satellite cities were to be created successfully, the broader national problem of core-periphery disparities would still be present and perhaps even intensified. Here, as in other aspects of spatial development policy, it would be inappropriate to propose universally applicable solutions.

The particular circumstances of individual countries should be carefully analysed and spatial policies, programmes and projects should then be tailored accordingly. In most cases, regional policies should be formulated with the objective of integrating the national settlement system. However, in larger countries, such as Brazil or India, where primacy is not an issue but

[66] H. W. Richardson, "City size and national spatial strategies in developing countries", p. 70.

[67] J. M. Nelson, op. cit. pp. 15–16.

[68] H. W. Richardson, "City size and national spatial strategies in developing countries", p. 68.

[69] J. M. Nelson, op. cit., p. 45.

[70] R. Paul Shaw, "On modifying metropolitan migration, *Economic Development and Cultural Change*, vol. 26, No. 4 (July 1978), p. 691.

where there is no nationally unified urban system, the spatial organization of development may better be undertaken in terms of emerging regional subsystems within the country.

Summary and conclusions

A high proportion of the Governments in both industrialized and developing countries have perceived that growth trends in large metropolitan regions have been excessive and should be modified through public intervention. One alternative—that considered in the present study—has been to promote the development of intermediate-sized provincial cities as counter-magnets for potential migrants to large cities. The rationale for this approach, which typically adopts some form of growth-centre strategy, is that intermediate-sized cities are large enough to generate significant scale and agglomeration economies (which almost by definition are lacking in small places) but not so large that these advantages are outweighed by concomitant diseconomies of agglomeration.

In many of the developed market economies of the west and in Japan, recent evidence strongly suggests that decentralization objectives—including the relatively rapid growth of smaller and intermediate-sized cities—are being realized or that they will soon be realized. Redistribution policies have played a positive role in this respect in some cases, but it is increasingly clear that other factors have been more significant. These factors include improved transportation and communications systems, the disamenities of many large cities, changes in residential preferences with greater emphasis being given to non-economic amenities, higher incomes that permit greater mobility, technological changes favouring decentralization and the general diffusion of social and economic infrastructure. In this context, there is less justification for intermediate-sized city growth policies in a promotional sense, but they may still perform a useful function by orchestrating more orderly development, especially in terms of the environment.

The Soviet Union and the centrally planned economies of Eastern Europe have, in varying degree both among countries and within countries over time, attempted to limit the growth of large cities in favour of alternative growth centres. In relation to other European countries, Poland and the German Democratic Republic already have fairly well-balanced urban systems; nevertheless, both countries are implementing measures to promote the development of smaller and medium-sized cities. The primacy of Budapest has been recognized as a significant problem in Hungary. A combination of government policies and independent decisions by industrial managers has recently brought about some decentralization, though the pace may slacken in the near future. In the Soviet Union, large cities continue to grow relatively rapidly, but problems associated with their growth would probably have been greater in the absence of central control over the location of industry. In the rush to industrialize, the centrally planned economies have tended to let sectoral policies favouring agglomeration dominate regional policies favouring decentralization. Nevertheless, they still maintain the long-standing objective of reducing, and eventually eliminating, social and economic differences among cities and rural areas.

Many developing countries have formulated growth-centre strategies based on the development of intermediate-sized cities. Usually the objective is to reduce the degree of primacy in the urban system, but even where primacy as such is not the major issue the sheer size of many large cities has caused severe urban management problems. In either case, induced growth centres are intended to be counter-magnets to divert migrants from large cities as well as generators of beneficial spread effects to their surrounding hinterlands. A related aim of growth-centre policies has been the creation of a functional urban hierarchy to provide better spatial integration for national economic, social and political activities. Unfortunately, the formulation of policies does not necessarily imply their implementation. In many developing countries, implementation has in fact been hesitant or sporadic. Even when genuine commitments have been made to promote the growth of intermediate-sized cities there has been a notable lack of spread effects. It also has been argued that growth-centre strategies that are intended to reduce interregional income disparities may increase intraregional disparities. Thus, early optimism with respect to the efficacy of growth-centre strategies has given way to widespread pessimism. However, some observers maintain that growth-centre policies should not be abandoned prematurely. In this view what is needed are better decisions with respect to the kinds, location and timing of relevant investments, as well as a longer time horizon and greater commitment to implementing policy measures. In addition, there is evidence that as national development proceeds there is a tendency towards greater interregional decentralization and intraregional dispersion. To the extent that this is so—and many countries deviate from the norm—the development of intermediate-sized cities may be justified as a means for accelerating decentralization and dispersion. A similar argument, commonly known as the Williamson thesis, maintains that increasing disparities in regional per capita income are typical of early development phases, whereas regional convergence is typical of the more mature phases of development. However, recent evidence does not support this position. Thus, even if population redistribution objectives were to be realized this would not guarantee success with respect to equity objectives. Lastly, it has been argued that growth-centre strategies need to be embedded within more comprehensive development schemes that take account of political, social and institutional factors as well as sectoral policies. Unfortunately, developing countries usually lack the resources to undertake all the planning, implementing, co-ordinating and integrating proposed by well-meaning planners. Efforts to add too many other

policy considerations to growth-centre strategies may only dilute the total effort to the degree that no realistic hope of success exists for any policy or strategy. What can be accomplished will vary from country to country; in each case, however, decisions concerning the timing and location of growth-centre investments are crucial. Moreover, these decisions need to be related to the historically inherited spatial structures of each country and to the nature of development processes; if these phenomena are poorly understood, attempts to implement growth-centre strategies may well be premature.

Part Five

RURAL-ORIENTED POLICIES

X. REVIEW AND EVALUATION OF ATTEMPTS TO DIRECT MIGRANTS TO FRONTIER AREAS THROUGH LAND COLONIZATION SCHEMES

*Tunku Shamsul Bahrin**

Basically, land colonization schemes involve the organized settlement of people in new areas, usually in conjunction with agricultural development. As many countries have had experience with such schemes, there is no lack of examples for examination. Experiences have ranged from the successful, as claimed by the agencies concerned, to the complete failures which are philosophically accepted and best forgotten.

Despite the widespread faith that politicians and national planners place in land colonization and despite the vast body of experience that has now accrued, there are as yet no general, comprehensive guide-lines for undertaking or studying land colonization. This situation may derive in part from the multiplicity of processes involved in land colonization so that it is open for examination to all disciplines, and no one specialist or even a group of specialists can be competent to deal with its scope and dimension. It can be said of colonization schemes, as Warriner does of land reform, that they constitute "an academic no-man's-land. No single science or study has yet established its claims, and each has its limitations. No single method of approach can take us all the way."[1] The subject thus remains interdisciplinary. It has attracted students from various disciplines and this has increased the literature on it, but there is no organized theory about the schemes. Each student has brought into play the point of view of his own discipline. Case studies in one discipline, such as economics, may be weak in another, such as politics. Rarely are these studies considered comprehensive. Indeed, settlement schemes have been criticized by sociologists, agriculturists, economists, political scientists etc. for failing to achieve their social, agricultural and economic objectives and for their absorption of scarce resources which might have been put to better use. In view of the common failures of the past and extensive proposals for the future, there is a case for trying to learn from the experience to date by examining the nature of settlement schemes so that alternative policies can be more realistically weighed.[2]

It was probably the desire to fill such a gap that led to the publication of a general article on land settlement, which states in the opening remarks that "it is the universality of the problem which causes one to ask whether enough experience of land settlement has accumulated, in the various countries of the world, to enable us to lay down a set of rules for the success of land settlement".[3]

While some of this author's observations are candid and even thought-provoking, his conclusions plead for much more empirical research on the subject, not only because of its intensive interest but because of its direct practical importance in the developing world. He points out that the literature is "very fragmentary and scattered in out of the way places".

That article was published 25 years ago, and despite the number of people researching the subject, the overall pattern of the work continues to be fragmentary and scattered. Economists, sociologists, public administrators, geographers and others publish the fruits of their research in different journals and magazines and may not be aware of what in fact has been done. It is even asserted that "these studies were premature, and that the lack of a general theory of resettlement schemes has led to wasted effort and replication of studies that could contribute very little to such a theory".[4]

It must be mentioned that studies on land colonization tend to be very narrow in scope. They concentrate more on particular projects or schemes or, at best, the overall activities of the agencies concerned. Even these studies only examine the projects at a particular time and very few follow-up studies have been done. The bulk of the studies are confined to the schemes in one country or restricted to one type of scheme in a particular country. Comparative studies based on field research are not extensive.

An attempt was made to compare the land settlement projects of a particular region: five different projects in three countries of Latin America were examined; the study concludes that:

> "Considered as a group, they seem to offer a good cross section of various conditions that might nor-

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[1] Doreen Warriner, "Land reform and economic development", in Carl C. Eicher and Lawrence W. Witt, eds., *Agriculture in Economic Development* (New York, McGraw-Hill, 1964), p. 274.

[2] Robert Chambers, *Settlement Schemes in Tropical Africa: A Study of Organizations and Development* (London, Routledge and Kegan Paul, 1969), pp. 7–13.

[3] W. Arthur Lewis, "Thoughts on land settlement", *Journal of Agricultural Economics*, vol. 11 (June 1954).

[4] Gary Palmer, "The ecology of resettlement schemes", *Human Organization*, vol. 33, No. 3 (Fall 1974), p. 247.

mally be encountered in Latin America land development ventures.

"Three of these projects are located in the desolate desert coastlands of Peru, each near prominent regional cities. One is across the Andean divide from La Paz, Bolivia, in the area known as the Yungas; these are virgin forest lands along the upper course of a major river, where tropical humid conditions prevail. Another project—or series of projects under one plan—is located in the entire basin of the major river of Mexico's populous central core-land; there elevated flat-floored basins alternate with rough marginal slopelands and rainfall is only moderate to scant."[5]

The author observes that although it is difficult to make comparisons given such heterogeneity, it is possible to have a much broader view of land development in progress.

Another study[6] carried out in the late 1960s compares a number of land development projects in countries of Latin America, including Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Mexico, Paraguay and Peru.

Chambers, using a different approach, presents his field study of land settlement in tropical Africa with reference to Ghana, Kenya, the Sudan, Uganda and the United Republic of Tanzania. In addition to his field observations, he adds observations on land development for other countries, such as Nigeria, Zambia and Zimbabwe, all from secondary sources. His approach was to make a historical and administrative study of one scheme, namely, the Mwea Irrigation Settlement in Kenya, and then to follow it up with comparisons with other settlement schemes in tropical Africa. Mwea is used for dissection, as it were, in order to compile an inventory of the parts of a settlement scheme, and this inventory has been used to provide boxes for sorting information about other settlement schemes.[7]

Studies of resettlement programmes on a comparative or regional scale for Eastern South Asia are relatively lacking. The comprehensive and pioneering work by Pelzer[8] covers pre-war land settlement programmes in Indonesia and the Philippines. He examines in great detail the problems of population maldistribution, land hunger and land tenancy, and discusses the various attempts and techniques of resettling people in the less developed parts of Indonesia and the Philippines. Recently, a few studies of a comparative nature have been made for Eastern South Asia, but these studies are on a less intensive scale.[9]

The post-war studies carried out for individual countries in Eastern South Asia are on a different plane. For example, in Malaysia, where a large number of land settlement projects are carried out by different government agencies, studies done on the projects of the Federal Land Development Authority (FELDA) number more than all the studies done on the other projects. As a consequence, there is a tendency for the average person to associate land development and settlement in Malaysia solely with the FELDA projects. The broader picture of land settlement is non-existent or unclear, and the same can be said for Indonesia, the Philippines and Thailand.[10]

A. Objectives of land colonization

Although any Government-directed land settlement programme involves, deliberately or otherwise, the movement and resettlement of people, not all the programmes have redistribution of population as their primary objective. In some cases, it is not even a significant consideration. In Malaysia, for example, redistribution of population has never been a conscious objective of the national land settlement programme. The emphasis of approach and objective differs from country to country, depending upon the problems faced by the individual country. In general, settlement programmes are cited as having population redistribution, economic, social, security and even political objectives. In many cases, it is difficult to separate the objectives.

Population redistribution

In a number of countries where there is a maldistribution of population, land settlement programmes have been initiated to relieve the pressure in the congested areas. Indonesia is the very obvious example where land settlement is directed towards encouraging

[5] Craig L. Dozier, *Land Development and Colonization in Latin America: Case Studies of Peru, Bolivia and Mexico* (New York, Praeger, 1969), pp. 14–15.

[6] Michael Nelson, *The Development of Tropical Lands: Policy Issues in Latin America*, Resources for the Future Series (Baltimore, Maryland, Johns Hopkins University Press, 1973).

[7] R. Chambers, op. cit.

[8] Karl J. Pelzer, *Pioneer Settlement in the Asiatic Tropics* (New York, Institute of Pacific Relations, 1945).

[9] See Tunku Shamsul Bahrin, "Policies on land settlement and development in insular Southeast Asia", *Modern Asian Studies*, vol. 5, No. 1 (1971), pp. 21–34; idem, "Land settlement in Southeast Asia: experiences and issues in rural development", *Solidarity*, vol. VIII, No. 5 (1973), pp. 46–56; idem, "Land settlement: policies and practices in Southeast Asia", in Robin J. Pryor, ed., *Migration and Development in Southeast Asia: A Demographic Perspective* (Kuala Lumpur, Oxford University Press, 1979), chap. 24; Colin MacAndrews, "The role and potential use of land settlement in development policies: lessons from past experience", *Sociologia Rusalis*, No. 2 (1979); and A. A. Laquian, "Planned population redistribution: lessons from Indonesia and Malaysia", 1979 (mimeographed).

[10] The International Development Research Centre (Ottawa, Canada) sponsored a joint study of land settlements in five Asian countries: Indonesia, Malaysia, Nepal, the Philippines and Thailand. All the studies but that for Nepal have been completed. See P. Guinness, ed., *Transmigrants in South Kalimantan and South Sulawesi* (Yogyakarta, Indonesia, Gadjah Mada University, Population Institute, 1977); T. S. Bahrin, P. D. A. Perera and H. K. Lim, *Land Development and Settlement in Malaysia* (Kuala Lumpur, University of Malaya, Department of Geography, 1979); C. Ramos Exaltacion, *Resettlement in the Philippines: Status and Evaluation of Selected Agencies and Settlements* (Manila, De La Salle University, 1978); Suthiporn Chirapanda and Worwate Tamrongthanyalak, *Resettlement and Transmigration in Thailand* (Bangkok, Agricultural Land Reform Office, 1978).

the migration of excess people from the densely populated islands of Java, Madura and Bali to the relatively underpopulated areas in Sumatra, Kalimantan and Sulawesi. Other countries where redistribution of population becomes a prominent objective include Peru, the Philippines, Sri Lanka and the United Republic of Tanzania. New settlements have also been established specifically to counteract the drift of agricultural workers from the land, especially to the urban areas, in Nigeria and Zambia.[11]

Economic objectives

In their widest form, the economic aspects of new settlements are of paramount importance. Whatever the other goals, the economic considerations, both to the Government and to the settlers, are emphasized. In a number of cases, it becomes an integral part of a national development plan. In the context of national development, land settlement is an agrarian reform programme particularly designed to relieve the pressure in the over-populated rural areas and to promote a more homogeneous distribution of land and labour. Settlement schemes, therefore, should not be considered local projects, but must be planned according to future need in all regions of the country and appraised in terms of overall national development. In these circumstances, the ultimate objective of land settlement is to increase agricultural production.[12] Through land settlement, employment can be created for underemployed rural labour and also to increase the family income of settlers who are selected from the poorer segments of the population. All in all, a well-designed and well-implemented land settlement programme would eventually give land to the landless, increase incomes of the poor, provide jobs for the unemployed and increase agricultural production, either for home consumption or export. In brief, land settlement is a means of utilizing available natural and human resources.

Social objectives

Land settlement, as part of a national rural development plan, provides an opportunity for the Government to provide social and community services more efficiently, effectively and at lower costs. It would be difficult for such services as water-supply, clinics or electricity to be provided to settlements that are dispersed over large areas. In new settlement projects, the houses can be located close to one another where such services can be provided. New land settlement schemes allow community and social life to be upgraded.

Security reasons

A number of Governments have set up new settlement schemes for security purposes. It is often felt that the establishment of new settlements in the sparsely peopled areas, especially close to border areas, will discourage illegal and subversive activities. Where the situation is a threat to national security, new settlement villages have been set up through government coercion. Examples of the counter-insurgency settlements are the new villages in Malaysia and the relocated villages in Mozambique.

Political motives

In some instances, new settlement projects have been initiated to obviate political problems.[13] Extensive land settlement programmes have been used in place of the more radical agrarian reform measures. The justification for this policy is that a land settlement programme will directly benefit the poor through the redistribution of public or State-owned lands and does not involve the confiscation of land from any designated group. The "hamlet" system and the arbitrary resettlement of black Africans in South Africa are other examples with political motives.[14] Sometimes new settlements can provide a means of integrating nationals of diverse ethnic and cultural groups by resettling them in the same village.[15]

Consistent with any or a combination of the objectives given above, a number of new settlement types have been established in frontier areas. Whereas they are basically the same in that people are relocated in these underdeveloped areas, the actual manner of their implementation may vary somewhat. In some cases, the programme may be extensive and form an important part of the overall national development plan whereas others are mere *ad hoc* measures to meet specific needs. Some of the participants may move completely at their own free will while others have to move because of government coercion. The nature and quantity of assistance provided by Governments to the settlers vary widely.

In view of the variety of types of new settlement projects and considering the fact that a good and workable scheme is an essential factor in determining whether people can be redistributed to the frontier areas, it is important that the various factors and elements that can contribute to or hinder the success of a colonization programme be studied and understood.

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[11] See F. S. Idachaba, "The 'demonstration effects' of farm institutes and settlements: theory and evidence", *Bulletin of Rural Economics and Sociology*, vol. 8, No. 2 (1973), p. 194; and Yitzhak Abt and Ezekiel Maoz, "Integrated rural development in Zambia: a case study of the Kafubu-Kafulafuta project", *Kidma-Israel Journal of Development*, vol. 1, No. 4 (1974), p. 29.

[12] Erich H. Jacoby, *Man and Land: The Fundamental Issue in Development* (London, Andre Deutsch, 1971), pp. 275–276.

[13] The political motive, as it pertained in some countries of Africa in the past, was succinctly expressed by Hermas de Araujo Oliveira, a high-level Portuguese official, at the Congress for Land Settlement Policy and Social Progress, 1970; cf. Poroamento e Propoçao Social en Africa, 1971, pp. 26 and 32; cited by Eduardo de Sousa Ferreira, "The present role of the Portuguese resettlement policy", *Africa Today*, vol. 21 (1974), pp. 47–55.

[14] See Desmond Cosmas, *The Discarded People: An Account of African Resettlement in South Africa* (Baltimore, Maryland, Penguin Books, 1972).

[15] Alexander T. Edelmann, "Colonization in Bolivia: progress and prospects", *Inter-American Economic Affairs*, vol. 20, No. 4 (Spring 1967), p. 40.

B. Considerations for a successful land colonization scheme

As land settlement is usually a Government-sponsored project, an assessment of its success or failure is important in determining whether such projects can be continued in the future or adopted elsewhere. So far, however, there exists no perfect model that can satisfy all strategies or justification of resettlement. Lewis, concerned with the widespread shortcomings of settlement schemes in the 1950s, identified a number of factors as affecting the success of land settlement schemes: (*a*) selection of the right place; (*b*) selection of the right settlers; (*c*) physical preparation of the site before the settlers arrive; (*d*) settlers' capital; (*e*) organization of group activities; (*f*) acreage per settler; and (*g*) conditions of tenure.[16] It is essential that all these factors be examined within the context of the experiences to date.

Selection of the right place

The right place must be one where the site as well as the location are suitable. As far as site is concerned, the physical aspects must be appropriate; the soil must be fertile, the rainfall adequate; the drainage and environmental conditions acceptable. The settlement must be conveniently located to afford it accessibility to the essential infrastructure services as well as to the market for the settlers' produce at a later stage. There is evidence of failures in land colonization where these considerations have not been properly understood.

Lewis states, and it has often been claimed, that one of the major problems of most schemes is that "the best lands are already settled, so that land settlement officers are almost by definition working with areas which the people have rejected for centuries, because of the difficulty of making a reasonable living there".[17] This may not be true in all cases in the light of technological advances that have done a lot to overturn the perception and utilization of the natural environment.

In most of the developing countries of Asia, Africa and Latin America, it would appear that Governments have devised a colonization programme because of the availability of unutilized and unalienated areas under their control. Whereas "colonization" becomes a national policy and programme, the essential administrative and bureaucratic machinery is not adequately attuned to deal with the programme. Very few national Governments, in the initial planning and implementation of their settlement programmes, have the requisite knowledge of the best sites and locations for the projects. The planners are handicapped because none of these countries has a satisfactory inventory of its land resources. They have an idea of where lands are available, but they are usually uncertain of the quality, carrying capacity and potential of such lands. One may even say that the claim of the fertility of tropical soils, much romanticized by eighteenth and nineteenth century chroniclers and travellers, has gained almost permanent credence amongst the nationalist defendants of the potential wealth of such lands. Politicians and their planning advisers have unabashedly used such statements to propagate the idea of new land colonization and development. The potential natural productivity of the tropical forest lands, however, is still a subject of controversy. The great variety of local physical conditions to be found within these lands, combined with the inadequate number of detailed studies, would make futile any sweeping assumptions. One would certainly need to consider the soils, slopes, drainage and temperature characteristics of a given locality to avoid long-term wastage.[18] The costs to determine the quality of and potential for such lands may be exorbitant and the planners may have the task of deciding on the viability and long-term benefits of such studies.

Since land is an important factor for any Government, frequent problems have arisen from inter-departmental rivalries and jealousies. Usually, the questions of alienation, administration and exploitation are delegated to different government departments and each department tenaciously holds on to its control. The situation is aggravated when land matters are vested in provincial or state governments which may not share the objectives of the central Government. In the Philippines, there were occasions when a resettlement scheme could not be developed on schedule by the Resettlement Agency because the land was concurrently administered by a number of other government agencies, each with its own plans for its development.[19] There have also been cases in Malaysia where land colonization has been complicated by the conflicting interests of the state government and the federal Government.[20]

To summarize, a government that is determined to have a long-term and extensive land colonization scheme must endeavour to have a detailed inventory of its land resources and a land alienation machinery that can reduce red-tape to the minimum. With respect to the former need, sufficient technology exists to take such an inventory, especially through use of remote-sensing techniques. Such studies and inventories, once completed, can then be easily updated.

Settler selection

The objective of settler selection is to recruit the most suitable persons who can best contribute to the development of the project. Lewis suggests that preference should be given to: (*a*) agriculturists of experience; (*b*) settlers of similar social background for each

[16] W. A. Lewis, loc. cit.
[17] Ibid.
[18] C. L. Dozier, op. cit., p. 4.
[19] Tunku Shamsul Bahrin, "Land conflicts in the Tanay resettlement project (Rizal), Philippines", *Journal of Tropical Geography*, vol. 27 (December 1968), pp. 50–58.
[20] Tunku Shamsul Bahrin, "Land development in post-independence Malaysia: some lessons", *Geographica*, vol. 4 (1968), pp. 67–83.

new area; and (*c*) only settlers who have capital of their own.[21]

The priority given to the agriculturists with experience obviously has merit. However, the principle need not be rigidly applied in all schemes. It would be definitely futile to resettle those people without agricultural experience in an agricultural project with minimum assistance, especially a project where traditional crops are to be grown. In the transmigration schemes in Indonesia, it has been shown that the "drop-out" rate among settlers recruited from the urban centres in Java has been very high. In those projects which are adequately supervised and where the use of modern technology is extensive, this principle can be relaxed somewhat. It may not matter so much whether a settler has any agricultural background or not if he is to be resettled in a cash-crop project, such as an oil-palm or a rubber scheme, where the day-to-day work is being supervised by trained and expert agriculturists. His function in these circumstances would not be different from those of a paid labourer. In instances where resettlement need not emphasize agricultural development, for example, in security and refugee resettlement schemes, insistence on agricultural experience would be misplaced.

The rationalization for resettling people speaking the same language, belonging to the same tribe or coming from the same group of villages is to minimize social tensions and to help organize community life. Experience has shown that settlement projects with diverse "social groupings" have created intergroup conflicts. Contributions of similar social groups towards cooperative and community efforts can be particularly helpful during the early period of resettlement.

However, it is not always possible to resettle "social groups". It may even be debatable whether such an action would be to the long-term benefit of the community. If settlers are recruited based on individual qualifications, as in FELDA projects, and where selection is done on a first-come first-settle basis, then resettlement of social groups can be difficult. In a multiracial society, national integration has also become a major aim of the government resettlement programmes. Communities and villages of one cultural group need to be discouraged. Rather, resettlement in frontier areas provides a golden opportunity for moulding a relatively integrated and assimilated community of diverse groups. If social groupings are not obvious in the beginning, the chances of tensions based on such groupings developing would be reduced. The other problem that can arise from resettling entire cultural groups is connected with the relationship of the resettled community with that of the local population. If completely new social groups are transplanted amidst an established community, tensions may develop, not among the settlers themselves but between settlers and the local population. The long-term disadvantages in creating this kind of tense situation require no elaboration, as can be seen in the Philippines, where Christian settlers from the north have been moved into Muslim-dominated territories in Mindanao and Sulu. Contacts and tensions over the decades have escalated into conflicts that have serious political implications including demands for secession.[22]

The third preference for settlers with capital is equally debatable and has to be assessed within the context of the overall objectives of resettlement. The basis of the preference is that since new settlement requires an immense capital outlay, a settler who has no capital of his own to begin with is gravely handicapped. If resettlement is intended merely to develop and open up new areas, then choosing settlers with some capital may be justified. If, as in the majority of cases, land settlement projects are designed specifically for the most disadvantaged segment of the population, i.e., the landless and the poor, then priority to resettle those with capital conflicts with the overall intention. It may be true, as observed in Thailand, where land settlements or *Nikhon* are limited to the landless poor, that many have failed to achieve the same income levels as adjacent villages despite higher levels of government inputs.[23] A similar observation has been made in respect of the State Land Development Projects in Kelantan (Malaysia), where settlers with capital have been able to develop their agricultural lots better than the poorer settlers because of their ability to engage outside labour to do the jungle clearing.[24] The experience in Ethiopia showed that "because the settlement agency provided such limited initial assistance and no mitigating services, attrition rates were high and only the most desperate or determined settlers remained".[25] To overcome the slow pace of land development among the poor settlers, greater financial subsidies and management assistance should be provided to them.

Despite the undoubted importance of settler selection, it is difficult to provide a perfect model of selection. It depends to a great extent upon the national objective and the group to which it is directed. Different countries have their own system of selection consistent with their local and national needs. However, no Government can go wrong if it can recruit

[21] W. A. Lewis, loc. cit.

[22] See also W. F. Wertheim, "Sociological aspects of inter-island migration in Indonesia", *Population Studies*, vol. 12, No. 2 (November 1959), pp. 184–201. A recent director-general of the Transmigration Department of Indonesia observed that "integration with local communities was hindered by socio-cultural barriers that had been erected by the deliberate encouragement of traditional provincial ways of life. The village community in a colonization area remained a static agrarian community, living cut off from the society of the settlement area". R. Soebiantoro, *Transmigration and the Prospects It Offers for Prosperity and Security* (Jakarta, Department of Transmigration and Cooperatives, 1971), p. 25.

[23] University of Michigan, Center for South and Southeast Asian Studies, "Population redistribution: patterns, policies, and prospects", Ann Arbor, Michigan, 1979 (mimeographed).

[24] See T. S. Bahrin, P. D. A. Perera and H. K. Lim, op. cit.

[25] Gail Simpson, "Socio-political aspects of settlement schemes in Ethiopia and their contribution to development", *Land Reform: Land Settlement and Cooperatives* (Rome, Food and Agriculture Organization of the United Nations), No. 2 (1976), p. 26.

settlers who are keen agriculturists and healthy and young enough to carry out the arduous work of pioneering and to be able to repay their loan to the Government.

Preparation of the site

Considerations in this factor range from leaving the settlers to carry out the work of land preparation entirely by themselves to the clearing and developing of the land being completely undertaken by the Government, and revolve around the question of the availability of funds. In cases where funds allocated for resettlement are small and the same funds need to be utilized to resettle as many people as possible, site preparation has largely been left to the settlers. It has been argued that large tracts of land in the past have been cleared and developed by pioneers without any outside help and assistance, and that the pioneering spirit should be revived and so also the spirit of "community development" encouraged among the settlers. It has also been felt that a more progressive society would develop if the settlers were not being "spoon-fed". Such views are no longer tenable. When pioneering was undertaken decades ago, political and social structures were different. Government interest and concern for land are equally different today; land colonization is a political issue, if not a political instrument. Pioneers had fewer expectations and were more self-reliant than even the poorest of present-day farmers. To ask the currently poor to open up areas in the manner that their great-grandfathers did is not going to be consistent with their expectations. Land colonization programmes with political motives cannot succeed if they are essentially implemented on the concept of "pioneering spirit" with little or no government subsidy.

Many land settlement schemes in Eastern and Middle South Asia, Africa and Latin America have failed mainly due to inadequate site preparation. There already is a need to draw the line on the assistance given. As one report states:

> "The decision concerning the degree of settlers' participation in site development is a critical one. It is obviously possible—as has been done in the past—to admit settlers to a new area without prior preparation of the site, allowing them to succeed or fail by their own efforts. Contrarily, preparations can be so comprehensive that the settlers have little to do. Between these two extremes are many possible degrees of site development, and the amount of preliminary work to be done in each case must be a matter for close deliberation and careful decision, giving due consideration to the land, the people who will occupy it, and the resources available."[26]

The extent of site preparation should also be considered in relation to the objective of the programme and the number of people to be resettled. If colonization is intended to be a development project to alleviate and improve the level of living of the people and also to contain the urban drift, then site preparation should be extensive. The landless and poor would be attracted to participate in land settlement projects if the infrastructure services were good and the land already cleared and developed. Psychologically, an initial good impression of the new area will help the settlers to decide to stay permanently. There is also the advantage of ensuring a well-planted and maintained crop that will be the basis of a prosperous future for the migrants. This is especially relevant for cash crops that need good management. It has been observed in Malaysia, where land development schemes were planted with rubber or oil-palm, that the standard of planting of the crops by the settlers on their own was low and as a result growth was not uniform. The stands were uneven and the yields were poor, despite the fact that the settlers had previous experience with the crop. To overcome this problem, the Government changed its policy and decided to extend its role of site preparation to the planting and maintenance of the crop for at least two years before the arrival of the settlers.

Lewis observes that the advantage of doing as much as can be done for the settler before he arrives—including clearing the land and building his house—is that it makes the settlement more attractive and therefore makes it easier to obtain and hold settlers. If the settler has to do these things for himself after he arrives, it will be some time before he can get down to the business of farming; and he may have to spend two or three years on the land before he gets a crop resulting in self-sufficiency.[27] This finding is particularly true where settlers are brought in, say, at the beginning of the rainy season, to enable them to begin growing their subsistence crops upon arrival. Failure to get down to their agricultural work immediately because of the time required for clearing etc. has forced the settlement agencies in the Philippines and Indonesia to extend their subsidy period and thus delay the settlement process.[28]

Settlers' capital

There is no doubt that the settlers, from their own funds or through government subsidies, require capital to develop their land. They need tools, seeds, fertilizer, housing materials and food until the first harvest or their cash crops come into production. Many settlements have failed because the settlers did not have enough working capital to cultivate the land efficiently. The question here is essentially one of how much and in what manner the Government should subsidize the settlers.

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[26] James W. Vining, "Site development and settlement scheme failure in Guyana", *Journal of Tropical Geography*, vol. 42 (June 1976), p. 87.

[27] W. A. Lewis, loc. cit.

[28] T. S. Bahrin, "Policies on land development and settlement in insular Southeast Asia".

If the target group of the settlement programme is the poor rural landless, it is most unlikely that they will have any funds to invest in their new farms. As Lewis advocates: "The absolute minimum is to ensure what is necessary to make production economic—main roads, water, seeds, fertilisers, tools, livestock—these the settler must have to make a success of the settlement".[29] If settlers have to be attracted to the settlements, it is equally essential that housing, schools, hospitals and side roads be provided. It has been universally accepted that the Government should provide the basic infrastructure, including shared community services.

Government assistance takes a number of forms. In some schemes, settlers are provided with credit facilities subject to a maximum amount. In other cases, and by far the most popular, the Government provides the materials in kind, e.g., work animals and food, but all these materials are eventually charged to the settler's loan accounts, as implemented in the Alto Beni project in Bolivia.[30] In Malaysia, capital assistance provided by FELDA, although similar in principle, is somewhat different in detail. Settlers and their families are paid subsistence allowances for work done under close agency supervision. These allowances are made for each working day. Costs of fertilizers, pesticides, field maintenance etc. are computed as development costs and are repaid fully by the settlers. This principle was adopted for two reasons. One, the subsidy provided has to be earned and not considered as a matter of right by the settlers. Secondly, maintenance of farms could be accomplished uniformly and a uniform standard achieved as the costs would be shared equally. In short, to ensure success, the Government should assist the settlers, either directly or indirectly, to obtain funds to develop their farms.

Group activities

The issue here is how much of the activities of the settlers is to be left to individuals and how much of it to be organized or guided. Again, there is no one answer. The ideal, of course, is to have a combination of both, but a great deal depends upon the structure of the project and also upon the type of crops cultivated.

If the people are settled on individual family units with subsistence as the objective, then the potential for group work is reduced. In this case, resettlement becomes an end in itself and not a means to overall economic advancement. If the crops are grown for sale and if the family size farm is to be economically viable, some central agency must organize all matters which are best done on a large scale, e.g., mechanical operations, irrigation, research and technical advice, processing of the crop, marketing of the crop, credit and purchase of supplies.

Colonization projects with co-operative and centralized control appear to be more successful than those where farmers are left to themselves and supervision is lacking. The history of some of the settlements undertaken by private groups and organizations supports this view. Strict central control and supervision are not very popular, however, in public settlement projects. The well-known Gezira scheme in the Sudan,[31] however, appears to have been a pacesetter which subsequently was adopted and expanded by FELDA in Malaysia. In both cases, the land is cleared, cultivated, maintained and the produce processed and marketed by, or under the close supervision of, the agencies. Whatever the demerits of both cases, they have ensured greater efficiency and relatively better returns for the settlers in the long run. Under such systems, the settlers are required to use the best seeds or seedlings, adopt tested methods of crop management and at the same time avoid the clutches of middle men in the sale of their produce. In times of low prices or poor world market conditions, settlers, if left on their own, have been found to sacrifice long-term interests to overcome immediate difficulties; and cases of improper tapping and illegal sale of their produce to unauthorized buyers have been reported. Participants have also been found to sell fertilizers supplied for use in their farms for immediate cash. Examples such as these can be quoted *ad infinitum* and they militate against the long-term interests of the settlers and the objectives of the Government.

Strict supervision, guidance and management combine the advantages of the plantation with the advantages of the family-size holding, though the status of the settler may be construed to have been reduced from that of an independent farmer to that of a labourer acting under orders.[32] "Independence" of the small farmer or settler is by no means all that secure. To be meaningful, such a status must represent an income sufficient to maintain the family without it having to get into debt. An adequate income is definitely more real than "undefined" independence. In brief, the record of success among properly managed and supervised colonization schemes is definitely better than that of schemes where settlers are left to fend for themselves. One major consideration is that if the colonization programme is too extensive, the usual problem of shortage of qualified and experienced personnel may become a serious constraint.

Acreage for settler

Because colonization schemes are invariably agricultural projects, the size of land allocated to each settler family is an important factor in attracting the settlers. The size of the lot must be predetermined, based on accepted and reasonable principles consistent with the eventual objectives of the programme.

[29] W. A. Lewis, loc. cit.

[30] A. T. Edelmann, loc. cit., pp. 43–44.

[31] Arthur Gaitskill, *Gezira: A Story of Development in the Sudan* (London, Faber and Faber, 1959).

[32] W. A. Lewis, loc. cit.

The two popular principles adopted in determining the farm size are: (*a*) it must be large enough to provide a living; and (*b*) it must not be more than what the settler can cultivate. Even if one accepts these as the only criteria, the size cannot be fixed throughout a country for all times and purposes. The farm size has to vary with the type of crop, market conditions, soil characteristics, management capacities and technological changes. The area that a settler and his family can cultivate must necessarily depend upon the equipment that is at his disposal. A settler who has the means and the equipment will be able to cultivate a much larger area than someone using traditional tools. A great deal of flexibility and regular reviews are needed in stipulating the farm sizes. There are, however, many examples where the acreage allocated to settlers is not governed by these principles. One example in which such considerations have been ignored is the transmigration project in Indonesia, where the land allocated to each settler has remained unchanged for nearly 50 years.

If the projects are intended to dissuade rural populations from moving to the towns, then the basic principle to be adopted is that the land allocated must be enough for the settler to earn a living and maintain a level of living higher than he had in his original village and measuring up to his expectations if he were to live in the town.

Most public programmes for land settlement are prefaced by a discussion of the social implications of improving income levels for landless peasants and *minifundistas*. Unfortunately, the programmes generally do not make explicit the degree of income improvement sought nor the possibility of conflict between income distribution and productivity objectives. Minimum income criteria are ignored by government agencies.[33] As such, acreage sizes are not related to targeted incomes. The only two cases where these criteria have been considered are in Malaysia and Nigeria. Even at the initial stages in Malaysia, the aim of the Government was to enable settlers to earn an income of approximately $120 per month, which was considered to be the average income of unskilled labourers in the towns. To enable them to earn that income, a settler would need to be given a rubber holding planted with approved high-yielding clones of at least 8 acres. This acreage, because of changing cost of living and other considerations, has now been fixed at 10 acres for rubber and 12 acres for oil-palm.[34] The Western Nigerian Farm Settlement agency, using a slightly more complex system, has devised land allocation based on an objective income of 300–400 Nigerian pounds (currently called nairas) and the labour of 450 man-days per annum. Like those of FELDA, the objectives of the Nigerian programme are: (*a*) the creation of living and working conditions comparable to those enjoyed by employees in the urban sector; and (*b*) the achievement of an income at least equal to, or higher than, the income realized by persons of comparable educational level and with jobs in urban areas.[35]

Like the question of the placement cost per settler, it has often been said that if settlers are given larger acreages, the number that can be resettled would proportionately be reduced. It would be wrong to be successful in resettling large numbers of settlers who are incapable of supporting their families. If it is assumed that it is politically feasible to establish a minimum income level, then the size of the farms and amount of capital assistance would depend upon the weight assigned to maximizing beneficiaries per unit of public investment. The choice is between quantity (more people with lower incomes) and quality (fewer people with higher incomes). Having established the income level, the man/land and capital/land ratios can be determined mathematically, given some knowledge of the quality of the land and climate and of assumptions about production costs and prices of potential products.[36]

Tenure

Movements of people are usually economically motivated. Farmers who are closely tied to the land are attracted to the settlement schemes by the prospect of the eventual ownership of land. The settlers are impatient to obtain titles to their land, and those titles must be tied to as few conditions as possible. The government agencies concerned have, for reasons of their own, tried to delay the issuance of titles. Many of the delays are by no means intended, but are due rather to inefficient bureaucratic processes. Some of the reasons for delaying the issuance of titles are tied to the repayment of loans by the settlers. Because it costs the Government a large sum of money to resettle the farmer and his family, the settler is usually required to repay either part or the whole of the expenditure of his settlement. In many cases, the collection of such repayments is difficult because of poor administration or the reluctance of the settlers to pay up. Repayments are better organized in cases where crops are being sold collectively and money owed by the settlers can be deducted practically at source.[37]

However, it is common for the Government to impose some restrictions or conditions on the land titles. It is the usual argument that, without such conditions, the settlers would either sell the land and thus become landless or subdivide the land among their heirs as to make them uneconomic. Both these situations are considered undesirable as they contradict the basic

[33] M. Nelson, op. cit., p. 245.

[34] Tunku Shamsul Bahrin and P. D. A. Perera, *FELDA: 21 Years of Land Development* (Kuala Lumpur, Ministry for Land and Regional Development, 1977), p. 28.

[35] W. Roeder, *Farm Settlement for Socio-Economic Development—The West Nigerian Case* (Munich, 1971), pp. 47–53.

[36] M. Nelson, op. cit., p. 245.

[37] This practice has been adopted by the Federal Land Development Authority (FELDA) in Malaysia and has proved to be workable in the sense that it is accepted by the settlers and the rate of repayment satisfactory to the agency.

objectives of the settlement programmes. In a number of cases the agency requires that a settler,

> ". . . must live on the farm and cultivate it. He must not sub-divide it between his heirs. He must not mortgage the farm. He cannot sell except to approved purchasers—or may not even be allowed to sell at all, in which case he must be guaranteed compensation for improvements if he surrenders his holding to the agency."[38]

Whatever the restrictions imposed, it is important that the settlers are guaranteed titles to their land.

Management and administration

In addition to the seven considerations suggested by Lewis, a good agency management and administration is important in determining the degree of achievement. It is strange that little attention has been paid to this aspect of the creation, organization and management of settlement schemes.[39] Failure or success has been generally attributed to the workings of land, climate, settlers and agricultural process. Staff and the organizational machinery are usually taken for granted. In an admirable study of the Zande Scheme, some of these aspects are examined in detail because the author believed he could not understand the situation in which he found "the people without studying the policies behind the development scheme and that such investigation required a review of the history of colonial administration, since so much of the Scheme's orientation had been derived from earlier policies and attitudes".[40]

A study of resettlement projects and programmes suggests "the technological officials and experts be as much part of the research as the people being developed (and that) the totality of the development project should be studied, rather than just the people being developed".[41] Another author observes that:

> "in trying to understand projects and to derive practical lessons from them the staff and their organizations are, if anything, more important than the people they affect. It is the staff who decide policy and execute it. It is they who perceive or fail to perceive the details of the situation in which a scheme is launched. It is they, and not the people they developed, who hold the initiative, especially in the early stages of the project. If staff and organizations are examined, . . . then more practical lessons may emerge. Developers may be able to learn something about their own behaviour, about the problems and conflicts they are likely to face and about needs that have to be anticipated."[42]

The importance of the role of good administration is obvious. It is possible to enumerate instances of poor administration that have led to excessive expenditures and non-realization of prospective benefits. There are cases where the policy-makers are unaware of the background and reasons for some policy decisions; and, as a consequence, they may be making unwarranted changes. As such, they must be aware of how government objectives and policies are being drawn. Frequently, a proliferation of agencies is engaged in the work of resettlement, resulting in wastage of manpower as well as giving rise to interdepartmental rivalry or even hostility. Shortage of trained and experienced management and supervisory staff at the ground level is a common feature in most of the projects that have failed. This becomes very serious when the total success or failure of a scheme depends upon its performance and the ability of the directing staff at the centre to supervise and monitor their activities. Since land settlement lends itself to an integrated type of development process, it is essential that the agency entrusted with the implementation function be able to harness the help and assistance of other government departments, especially if the settlement agency itself has not been given the funds and the necessary supporting personnel. The success of FELDA can be attributed to a great extent to its ability to obtain the assistance of other departments when requested. In the same way, projects in Indonesia and elsewhere have failed because such assistance was not forthcoming when needed. In such circumstances, it would be most useful if the agencies were at first placed under one of the powerful political personalities who are able to co-ordinate and command such assistance.[43] Thus, a good and well-managed settlement agency with trained and competent staff is an essential factor in determining the degree of success of any development project, in some cases more important than the settlers themselves.

It can thus be safely concluded that an adequate consideration of these eight factors within the context of national conditions and resources would ensure satisfactory planning and implementation of new colonization projects. What is more important is that these projects can then be replicated many times so as to be an effective instrument in directing migration to the less developed parts of the country.

C. Land colonization, spontaneous migration and regional development

Since the record of sponsored colonization has been generally mixed, where the failures outnumber the outright successes at high costs to the Government, planners have sometimes been of the opinion that the process of opening up the frontier areas through migrations should better be left to the voluntary and

[38] W. A. Lewis, loc. cit.
[39] R. Chambers, op. cit., p. 8.
[40] Conrad C. Reining, *The Zande Scheme: An Anthropological Case Study of Economic Development in Africa* (Evanston, Illinois, Northwestern University Press, 1966), p. 140.
[41] Ibid., p. 231.
[42] R. Chambers, op. cit., pp. 8–9.
[43] It has been observed that the initial launching of land colonization in Malaysia, the Philippines and Sri Lanka can be traced to the personal interest and dynamism of the political figures entrusted to head the ministries or departments concerned. In most cases, they are senior Ministers.

spontaneous choices of the individual. In cases where the number needed to be resettled is large, the eventual savings to the Government would be substantial.

Recent estimates indicate that the current rate of new rural land settlement is from 4 million to 5 million hectares annually, with about 75 per cent of this amount due to spontaneous settlement.[44] Nevertheless, fewer studies exist on the process of spontaneous redistribution of population in the rural areas. There are a number of reasons to explain the relative dearth of such studies:

(*a*) Spontaneous movements are usually difficult to document, either chronologically or quantitatively. It is equally difficult, tedious and costly to identify and locate such groups of people. Researchers tend to be discouraged even from the beginning;

(*b*) Because these movements are seldom in response to any government policy, relatively little sponsorship is available to do research in this direction. In countries where such movements are carried out on a large scale and where the settlers tend to squat illegally on public or private lands, disputes have arisen causing embarrassment to the authorities;

(*c*) The other reason is, of course, the relative ease of carrying out research on Government-sponsored colonization projects. The records are usually available concerning the policy programmes, the location and procedures of settlement, details about the settlers etc.

All in all, the process of spontaneous migrations is poorly understood and inadequately quantified.

Although spontaneous migration without any government assistance is generally widespread, it presents problems of its own. In a number of cases, the settlers have a variety of land problems. In some instances, the problems may be due to their inability to choose areas that are fertile; and, more serious, these lands may belong to the local population who may have their own customs in dealing with land matters. Since these settlements are established by individuals, community services and facilities are usually poor and take a very long time to become available. Unsupervised farming systems and disregard for proper land management among the spontaneous colonizers have created all types of erosional and environmental problems.

Studies reveal that spontaneous migration is not random and unplanned, but that it involves systematic co-operation between early migrants and those who follow.[45] It is for this reason that spontaneous migration usually takes place in areas where development has been initiated by others. A number of government actions and inputs into rural development which are not intended directly to redistribute population, nevertheless have redistributive effects. For example, when the Government opens public lands for individual settlers, large-scale migration within rural areas results. Highway construction often triggers "land-rushes": for example, the construction of the Belem-Brasilia road in Brazil resulted in the reported migration of over 2 million people to locations opened by the highway.[46]

Based on all these experiences, there are ways by which planners can improve, channel and expand the unassisted movement of people to the frontier areas. These ways are, first, to remove existing constraints to out-migration areas, such as availability of land, access to project sites and problems in obtaining initial support services; and secondly, to provide incentives through employment creation.

Land alienation

As has been observed in a number of cases, land disputes between migrants and the local population emerge as a recurrent factor in the failures of spontaneous colonization. It is in this direction that government can possibly help by obtaining, delineating or reserving such lands where settlers can move in. Such experience already exists in the Philippines, where the resettlement agency (the Department of Agrarian Reform) has large tracts of land reserved for resettlement but not yet activated. Spontaneous migrants move in to open up these areas; and when the area is officially activated, the cultivators are legalized as settlers. This procedure is convenient both to the settlers and to the Government.

Access

It is now universally recognized that access to the projects area is a prerequisite of any colonization scheme—sponsored or spontaneous. It is no accident that migrants tend to open or develop areas where Governments have already initiated highway construction or new communications networks, or those areas which are relatively accessible from new or existing roads. Access must be a government function and not be left to the settlers, who have neither the means nor the manpower to provide the necessary road facilities.

Services

Throughout this paper, it is consistently argued that new settlement communities must be provided with health, credit, educational and extension services. In sponsored projects these services are usually provided to attract migrants to the frontier areas. Such services are provided to spontaneous settlements usually in response to the demand of the settlers and invariably

[44] T. J. Goering, *Agricultural Land Settlement*, Issues Paper (Washington, D.C., World Bank, 1978).

[45] This pattern appears to be universal. For a deeper understanding of the actual process, see P. D. Simkins and F. L. Wernstedt, *Philippine Migration: The Settlement of the Digos-Padada Valley, Davao Province*, Southeast Asia Studies, Monograph Series No. 16 (New Haven, Connecticut, Yale University Press, 1970).

[46] University of Michigan, Center for South and Southeast Asian Studies, op. cit., p. 90.

at the later stages of the process of settlement. Since the Government will eventually have to provide such services, it would definitely be most useful if it could commit itself to provide such facilities in the early process of settlement so as to attract more spontaneous migrants. In this respect, a complete change in attitude towards spontaneous settlers is necessary. There is no need to condemn a generation of spontaneous colonists to a life of deprivation. The idea that pioneer settlers need not be universally provided with credit and full range of social services from the date of entry into new areas seems to reflect a complete disregard for social costs. Justification rests on the premise that massive support to colonization areas frequently has been largely wasted—benefits have been short-lived, the social infrastructure has fallen into disrepair and become inoperative, colonist turnover has been high and per capita production has been low. Consequently, public funds would have been better used in other endeavours to achieve social goals.[47] Be that as it may, such services are essential in creating viable present-day communities.

Employment creation

As migration is usually economically motivated and availability of employment is always a major attraction, it is essential that employment opportunities are made available in the new areas. Agriculture will no doubt continue to be the core around which colonization communities are built because only an agriculture strategy weds the surplus labour of the congested areas and surplus land of the frontier areas in a low-cost and practical way.[48] The first priority, therefore, should be to establish core communities of agriculturists directed towards surplus production.

Surplus production not only provides opportunities for community differentiation, it requires community differentiation. As one report puts it:

> "Agriculture does not develop by itself. It requires a complete institutional system to support it, market its products, and provide inputs, credits and professional advice. The rural community, which is the agent of agricultural development, needs services for its population, such as education, health, public facilities and commercial outlets. The efficiency and location of both producer and consumer services exert a strong influence on the success of agricultural development."[49]

It has been observed that the Khashm El Girba settlement scheme in the Sudan had a considerable multiplier effect on the development of the area. Within a period of five years, the number of skilled workers employed in the public authorities in handicraft, industry and trade reached 5,000.[50] However, many experiences have aptly demonstrated that development of new resources and job creation at modest income levels in the frontier regions cannot be achieved cheaply.

In view of all this and within the context of the financial and manpower constraints of Governments, sponsored and spontaneous settlements can be integrated to redistribute the maximum number of people to the frontier areas. Planned and sponsored resettlements can be used as the core and magnet to attract spontaneous migrants that may be assisted in getting land, and access to social services and probably employment. Implicit in the argument is the notion that viable communities which attract and incorporate spontaneous migrants are not only less costly, but they are in many ways less risky and certainly more natural than communities that consist only of sponsored migrants. It does not follow, however, that these communities can flourish unsupported and unplanned. Greater support to early migrants and sound planning for those who come later will greatly improve migrant welfare and facilitate the settlement process.[51] The Government can assist the spontaneous colonization of new areas by making and preparing feasibility studies of the potential and capability of the soil and ascertaining its usability for different crops. Through agricultural extension, it can furnish a wide range of helpful technical assistance, such as giving advice about crops and farming methods, the construction of a durable home, the provision of potable water and the establishment of private and community sanitation. It can possibly make arrangements for moving together to the area all the people who live in a community, thereby making it easier for them to adjust there.[52]

The approach adopted to encourage spontaneous migrants to open up the frontier, after establishing a Government-sponsored and supervised resettlement scheme, can be further extended to be part of an integrated regional development. The principle would be one in which land development and resettlement can play a major role in the regional plan. If assistance and facilities are made available for further agricultural expansion, then spontaneous agricultural migrants could first be attracted to take up land in such areas. Once the agricultural development has begun, migrants engaged in secondary and tertiary activities could be attracted to provide the necessary services for the growing population. These activities could take place in preplanned or predetermined towns or urban centres. The entire process, of course, can take anywhere between 15 and 30 years to develop into a normal community. This concept of development, although appearing to depend a great deal upon the inflow of spontaneous migrants, needs to be carefully

[47] M. Nelson, op. cit., pp. 288–289.

[48] Gloria Davis, "Moving with the flow: the case of spontaneous migration in the Indonesian transmigration program". 1969, p. 33 (mimeographed memorandum).

[49] Raanan Weitz, David Pelley and Levia Applebaum, *New Settlement and Employment* (Rehovoth, Settlement Study Center, 1976), p. 6.

[50] Peter von Blackenburg and Klemens Hubert, "The Khashm El Girba settlement scheme in Sudan", *Zeitschrift fur Auslandischt Landwirtschaft*, vol. 8 (1969), p. 341. A study of Nigeria shows very high drop-out rates among settlers, which have negative demonstration effects. See F. S. Idachaba, loc. cit., p. 207.

[51] G. Davis, op. cit., p. 28.

[52] A. T. Edelmann, op. cit., p. 51.

integrated, both in planning and in execution. The machinery needed can be complex.

A number of countries have adopted the approach of integrating resettlement programmes into regional development plans; however, in the majority of cases, the actual workings of it have remained unclear. Indonesia has adopted it since the beginning of its First Five-Year Plan in 1969, but there is little indication of how this is to be achieved, beyond arguing for "further expansion of the concept of transmigration as a land settlement programme designed for the benefit of both newcomers and local people"; in that way, "if transmigration projects become centres of economic growth, migrants seeking work in all fields, not just in agriculture, will be drawn to them".[53] Despite its early setback, it continues to be felt that:

> ". . . an official transmigration program is an essential part of any strategy for regional development in Indonesia. But it must be a program specifically directed at promoting broadly based regional development. This will not be achieved by settling small farmers to produce food for themselves or even cash crops for export. It must aim primarily at removing the obstacles, both to investment in development projects in the Other Islands and to mobility of labour to the Other Islands, which are due to poor transport, communications and other infrastructure. These objectives of a transmigration program for regional development imply an emphasis on opportunities for wage employment, in the first instance in public works and public utilities."[54]

Similarly, Malaysia has adopted the concept of integrating land settlement with regional development. A number of projects have been laboriously designed by international consultants and some of these have been implemented. Prominent among these are the Jengka Triangle and the Pahang Tenggara region in Pahang and the Johore Tenggara region in Johore. Whereas the land development and settlement part of the Jengka project have developed according to schedule, bringing in the settlers, the urban centres and the spontaneous movement of businesses and services have been lagging. It is probably too early to expect the growth of such urban centres. One weakness of the whole approach may be that in the early stages of resettlement, the immediate needs of the settlers are those basic to their rural way of life and agricultural economy. The urban centres which could cater for that stage of development would be agriculturally based market towns. Only when the schemes are in an advanced stage of development, with commercial and industrial and other sectors pressing for higher order of demand, will a full-fledged urban centre be able to take off on its own. "Phases" or "stages" of urban development strategy may be the answer to this problem.[55]

The non-realization of the objectives of the Jengka development plan can be attributed to two major factors. First, there is a separation of the function for the agricultural and urban sectors of the project. The Jengka Development Authority undertakes the development of the townships and infrastructural facilities while FELDA is involved with the agricultural development and the settlers. One way of improving the situation is for the Jengka Authority to keep pace with FELDA activities and prepare plans for the development of the settlements catering for the needs of their inhabitants. The second factor is more important. The Jengka Authority did not sufficiently publicize to the general public the opportunities available for establishing business concerns in the locality. More comprehensive and concrete efforts should be made to encourage entrepreneurs of varying capital capacities to set up businesses. If spontaneous migration is to be incorporated into the colonization process of the frontier areas, the agencies concerned must make known the opportunities and render whatever assistance required. A leaf from the planning and implementation book of the Northern Paraná project in Brazil would help remedy these problems.[56]

Conclusion

Despite setbacks, land colonization projects have indubitably helped in the opening-up of the frontier areas and have effected some redistribution of population. The failures experienced may not be due inherently to the concept but more to faulty planning and execution. As a strategy, land colonization can indeed disperse population, but what is important to remember is that it should not be considered that it is an end in itself or that it is just a convenient means of redistributing population. It should be conceived as a proper strategy in creating new and viable communities through the scientific use of resources.

In countries where both land resources and funds are available, land settlement can be a completely State-sponsored programme, especially in cases where the number of people involved in resettlement is relatively small. Where funds are not available and the number of people involved is large,[57] land settlement

[53] Joan M. Hardjono, *Transmigration in Indonesia* (Kuala Lumpur, Oxford University Press, 1977), p. 93.

[54] H. W. Arndt and R. M. Sundrum, "Transmigration: land settlement or regional development?", *Bulletin of Indonesian Economic Studies*, vol. XIII, No. 3 (November 1977), pp. 85–86.

[55] T. S. Bahrin, P. D. A. Perera and H. K. Lim, op. cit., p. 384.

[56] In this successful project, the "foundation of urban centres and the linking of these to their immediate rural hinterlands and to the outside have been the keystone of planned colonization in Northern Paraná". It took nearly 30 years before the project could be fully realized. Craig L. Dozier, "Northern Paraná, Brazil: an example of organized regional development", *Geographical Review*, vol. XLVI, No. 3 (July 1956), p. 325.

[57] It is common for implementing agencies to blame shortage of funds as the reason for shortcomings and shortfalls in performance. It is observed that in Indonesia, the transmigration programmes budget rose from 800 million rupiah in 1970 to 6,652 million in 1974 and 14,936 in 1976. It was estimated, however, that during the first year of the current plan (Pelita II), 24 per cent of the budget was not spent. This unspent portion rose to 34 per cent in the second year and 96 per cent in the third year. G. Beddoes, "Report on transmigration budgetary and accounting procedures", Jakarta, Department of Transmigration, Jakarta, 1976, quoted in A. A. Laquian, op. cit., p. 5.

can be integrated with regional development plans in which the former can serve as an attraction to spontaneous migration. Whatever the approach adopted, some basic policies and principles should be observed so that past errors will not be repeated.

An extensive land settlement programme cannot be planned and implemented in haste or it will usually end up in waste. A successful programme must be planned and tested so that the model can be successfully replicated and do not remain as a mere "show-case". Since the programme encompasses the creation of whole new communities, it should appropriately involve the entire government machinery. A strong and well-organized agency thus becomes essential to plan and co-ordinate all the activities. A detailed knowledge of available land resources is important at the initial stage of planning so that suitable locations for colonization can be decided on and the marginal or poorer ones can be avoided. It is also important in the planning to determine the type of crops to be grown and the supporting industries to be established. Proper settler selection and training must be instituted. This task is essential so that drop-out rates can be reduced to the minimum. To attract and retain the settlers on the settlements, the community needs all types of assistance to help the settlers in their farm work and also to ease their living through the provision of services. The participants selected should not be paradoxically delegated to a life of deprivation. The settlers must also be assured of an improved economic status and also be guaranteed titles to their land. All this requires an efficient and dedicated management, especially in the settlements themselves.

Knowledge of the successes and failures of specific programmes is wide and the body of literature appears to be increasing. The appeal for a general theory, should there be such a thing, remains unanswered. The studies continue to describe and analyse individual projects at a particular point of time, as if the settlements are ephemeral features on the drawing-board or landscape. The settlements are permanent and they should be treated as such. So far there is a dearth of knowledge of what happens to the settlements one or two generations after their establishment. If these planned settlements continue to create conditions similar to those of unplanned settlements, then some rethinking is necessary. The dynamics of a new settlement, up to the second or third generation, must be understood to avoid repeating past mistakes in an environment of depleting resources.

XI. RURAL DEVELOPMENT PROGRAMMES: PLANNED VERSUS ACTUAL MIGRATION OUTCOMES

*Sally E. Findley**

In recent years, there has been increasing awareness of the vast developmental differences between and within the so-called "third world", and it is increasingly obvious that generalizations about this entire group of countries do not hold.[1] None the less, one generalization is still likely to be true: in one way or another, development programmes in most of these countries have influenced the pattern and magnitude of population movements within their boundaries, notably between rural areas and towns.

In many cases, the migration outcomes were neither intended nor anticipated. For others, planned migration outcomes failed to materialize. It is clear that many development programmes influence rural outmigration, but the actual migration outcomes may differ substantially from those intended.

The question is why discrepancies exist between planned and actual migration outcomes. This paper examines rural development programmes that have been implemented in order to increase rural productivity and incomes, and sometimes more explicitly to "keep them down on the farm". For each programme type, the discussion includes the explicit programme objectives; some details on programme design; and expected or actual employment, income and migration outcomes.

Two basic types of rural development strategies are considered. The first is the capital-intensive agricultural development strategy that characterized most rural development programmes designed before the mid-1970s. These projects emphasized commercialization and development of cash-crop opportunities. Among the projects undertaken to this end are irrigation projects, loans-seeds-technical assistance for cash crops and other programmes directed towards increasing output regardless of employment or equity considerations. The second strategy includes projects loosely grouped under the heading, "integrated rural development". Although there is no accepted definition for integrated rural development, these programmes emphasize human resource development, employment and equity concerns. The experience with these programmes is more limited; hence, the evaluation of migration consequences is based more on theory than empirical results.

Land settlement or colonization schemes[2] are not included in the discussion because they are a special type of rural development programme and have a different set of goals and problems than the others discussed here. More importantly, despite their high cost, these projects tend to involve relatively small numbers of migrants.

Many of the programmes discussed below were specifically designed to slow the drift from country to town, although rural-urban migration is only one of several possible migration outcomes. For example, rural irrigation programmes may result in a substantial increase in demand for wage labour, such that the impact on rural-rural migration patterns may far outdistance any modification to rural-urban migration flows. Complete evaluation of the migration outcomes of development programmes requires specificity with respect to the exact type of migrant. Because a lack of specificity has contributed substantially to observed differences between planned and actual migration outcomes, before proceeding with the evaluation of rural development programmes it is important to discuss differences between types of rural migrants.

A. Differences in migrant types

Many studies have shown that rural-urban migrants are generally younger, better educated, more skilled and/or better-off than those who stay behind.[3] A search for better-paying, non-agricultural jobs generally motivates the move to towns. Even though such jobs are scarce in cities, where the urban underemployment and unemployment rate can exceed 25 per cent, the prognosis for employment in rural areas is so very limited that migrants still prefer to take their chances in town.

Not all migrations to cities are highly selective. At La Paz, Bolivia, almost 40 per cent of the migrants were landless prior to migration and almost all were

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[1] See Charles Elliott, *Patterns of Poverty in the Third World: A Study of Social and Economic Stratification* (New York, Praeger Publishers, 1975).

[2] For a discussion of land settlement schemes, see Alan B. Simmons, "Slowing metropolitan city growth in Asia: policies, programs, and results", *Population and Development Review*, vol. 5, No. 1 (March 1979), pp. 87–104.

[3] Sally Evans Findley, *Planning for Internal Migration: A Review of the Issues and Policies in Developing Countries*, International Statistical Programs Center Research Document, No. 4 (Washington, D.C., United States Bureau of the Census, 1977), pp. 9–17.

illiterate and unskilled.[4] Studies in Botswana, Indonesia, Mexico, the Niger and Peru provide additional documentation of migration of the very poor and uneducated to cities.[5] For these migrants, cities are perceived to provide their only opportunities for employment, given sex-linked job opportunities, proximity to the city or the impossibility of obtaining rural land or work.

If opportunities for work can be found in rural areas, however, many less selective prospective rural-urban migrants choose rural-rural migration. A number of constraints[6] dictate choice of a rural destination:

(a) *Relative certainty of finding seasonal wage labour on plantations or other commercialized farms.* Landless or near-landless people cannot afford to risk urban unemployment and may prefer some form of contractual rural work, albeit at lower wages or for a limited duration;

(b) *Distance.* The distance or cost of moving to a city may restrict migration by the poor, particularly for those who must be able to return at certain times. Language or cultural barriers also limit migration options for the poorest;

(c) *Seasonality in ability to work elsewhere.* Tenants or small farmholders who wish to continue cultivating their own land cannot look for a permanent job. Given the timing of their labour availability, rural-rural migration may be the only option for off-farm work;

(d) *No kin or friends in cities.* Particularly for the less selective migrants, kin or co-villagers at the destination provide information about job opportunities. They may provide shelter upon arrival, and some even may help obtain a position for the migrant. If the potential migrant household has no urban contacts, migration to a city is not likely.

Table 13 summarizes the distinctions between the different migrant types.

Because individual characteristics, motivations and constraints differ by migrant type and duration, not all rural residents will respond in the same way to rural development programme outcomes. In addition, if the programmes change the characteristics of the individuals, ultimately the project may engender a change in the pattern of migration from that area.

The evaluation of rural development programmes is based on the following assumptions about differential migration responses:

(a) *Most selective potential migrants.* These migrants are the sons or daughters of the medium to large farmholders. Because there is strong parental support for them to go to cities to complete their education or to obtain white-collar employment, rural job creation is not likely to influence their migration probabilities. Job creation at cities in the vicinity may influence the migration destination or perhaps result in rural-urban commutation;

(b) *Moderately selective potential migrants.* These migrants are the youth or young adults with some education but not much money with which to pursue further schooling. They are less concerned with prestigious urban positions than with jobs *per se* or ways to substantially increase their income. Depending upon their resources, this group may be responsive to opportunities to commercialize or diversify their production, or to establish non-agricultural enterprises in market towns in the vicinity. If not all family members participate in running the farm or enterprise, migration to cities is still likely for those not essential to the operation;

(c) *Less or negatively selective potential migrants.* These migrants are the landless or farmers with farms too small to guarantee subsistence. Programmes raising farm productivity may still not guarantee subsistence for this group, because their holdings are too small. These landless and near-landless people are the group most sensitive to rural employment creation, as their urban prospects may be most limited. Thus, wage labour positions created through development activities could alter migration for this group. But because they are most likely to have been rural-rural migrants, there is not likely to be a change to rural-urban migration levels.

B. Commercial, capital-intensive agricultural development strategy

The commercial, capital-intensive agricultural development strategy is the rural complement to an urban industrialization strategy. By shifting to capital-intensive means of production, agriculture is expected to reduce its labour demands. The resulting surplus rural labour is expected to migrate to town, where it is to be used to spur industrial development.

A comprehensive survey of rural development options finds that:

> "Most underdeveloped countries have pursued a strategy for rural development which is located toward the technocratic end of the spectrum. The prime economic objective has been to increase agricultural output. . . . The economic system has been justified essentially in terms of a liberal capitalist ideology: emphasis is placed on competi-

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[4] Juan Fernandez, "El migrante campesino en la urbe: situación socio-económica", *América Indigena,* vol. 36, No. 2 (1976), p. 317.

[5] Migration of the very poor to cities is discussed in: Coralie Bryant, "Rural to urban migration in Botswana", Washington, D.C., United States Agency for International Development, The Office of Women in Development, 1977, p. 28; S. V. Sethuraman, *Jakarta: Urban Development and Employment,* World Employment Study (Geneva, International Labour Office, 1976), p. 97; Lourdes Arizpe, "Mujeres migrantes y economía campesina: analisis de una cohorte migratoria a la ciudad de México, 1940-1970", *América Indigena,* vol. 38, No. 2 (1978), pp. 311–312; Carmen Diana Deere, "The differentiation of the peasantry and family structure: a Peruvian case study", *Journal of Family History,* vol. 3, No. 4 (1978), pp. 422–448; and Jacques Barou, "L'émigration dans un village du Niger", *Cahiers d'études africaines,* vol. 16, No. 3 (1976), pp. 627–629.

[6] For a more detailed discussion of these constraints, see Sally Evans Findley, "Rural development, migration, and fertility: what do we know?", prepared for the Office of Rural Development of the United States Agency for International Development; Chapel Hill, North Carolina, Research Triangle Institute, 1979.

TABLE 13. INDIVIDUAL CHARACTERISTICS OF RURAL OUT-MIGRANTS COMPARED WITH RURAL NON-MIGRANTS

Characteristics	*Very selective rural-urban*	*Less selective rural-urban*	*Less selective rural-rural*
Age	Young (15–25 years)	Young (15–30 years) Some older	Older (30+ years)
Sex of migrant	Male; female also in Latin America	If young, male but wife may join later. Single females for domestic service If older, entire family	Entire family; otherwise male only
Education	At least primary and probably secondary schooling	Some primary; perhaps some secondary	Uneducated
Family size	Not relevant to decision	Large natal families for single migrants Small migrant families for married unless only spouse goes	Large household size
Land ownership	Large land-owners Some medium-sized farm owners	Small farm owners or landless	Mostly landless
Occupation/skills	Tend to have little employment experience	Some with non-agricultural skills; mainly agricultural only	Agricultural unskilled
Urban contacts and awareness	High urban awareness through education and media	Urban contacts and kin important	Kin in rural areas determine destination Low urban awareness
Modern attitudes	Aspiring seeker Risk-taker	Willing to take some risk but much less	Limited ability to take risks
Ethnic variables	Less inhibited by need for proximity to same language	Matrifocal residence enables dual household. Need to be near kin. Language constraint may restrict movement.	Move to areas of cultural similarity or same region.
Importance of distance to destination	Little	Moderately important	Important
Motivation for migration	To obtain additional schooling. To seek non-agricultural job.	To seek permanent urban job or enterprise	To supplement low farm earnings.
Duration of migration	Permanent or serial urban-urban	Circular to permanent	Seasonal or circular

Source: Revised from Sally Evans Findley, "Rural development, migration, and fertility: what do we know?", prepared for the Office of Rural Development of the United States Agency for International Development; Chapel Hill, North Carolina, Research Triangle Institute, 1979.

tion, free markets, and widely dispersed private property as sufficient conditions for achieving the objective. In practice, property ownership is highly concentrated. . . . The benefits of technical change and higher output accrue, at least in the first instance, to the landowning elite and other men of property. Inequality in income, far from being deplored, is welcomed, since it is assumed that the rich will save a large proportion of their extra income and thereby contribute to faster accumulation and growth. In other words, the concentration of income and wealth is one of the ways whereby the output objective is expected to be achieved."[7]

The driving goal of the capital-intensive development strategy is increased agricultural output and productivity. Through technological advice, credit and other inputs to the farmers, output is expected to rise. The programme methods and inputs are designed to accelerate the accumulation of wealth among large land-owners, with the assumption that the resulting increased income will be reflected in higher savings and investment. Eventually the benefits of this increased productivity are assumed to "trickle down" to the rest of the rural population.

Even when the original strategy was not directed solely towards the larger land-owners, the method of implementation has often ruled out participation by small-scale farmers or the landless labourers. The technology upon which the higher productivity is based is expensive and often more of a risk than traditional methods. Without adoption of the entire approach, the new seeds do not necessarily produce higher yields. Because inputs (seeds, fertilizer, water, pesticides) require substantial cash outlays, the innovator needs some form of credit. The poorer farmers do not have enough land to qualify for commercial credit and are unable to utilize the new techniques, because the entire package must be adopted.[8]

As a result, the large land-owners get richer, while the small farmers are left behind. Because the increased output brings down prices, the small farmer is doubly hurt: using traditional forms of production at lower price levels, his income drops. In the absence of price supports, the farmer has little recourse but to sell

[7] Keith Griffin, "Policy options for rural development", *Oxford Bulletin of Economics and Statistics*, vol. 35, No. 4 (November 1973), pp. 240–241.

[8] Ibid., pp. 243–248.

out to the large land-owners. He can either become an agricultural labourer or he can migrate.[9]

Farmers or labourers displaced by mechanization or farm evictions have two migration options: to look for work in other rural areas; or to move to a city. Studies undertaken in Colombia, Guyana, India, Morocco, Papua New Guinea, the Philippines, Thailand and Zambia[10] show that the displaced persons moved to cities; while those conducted in Bolivia, New Hebrides, Nicaragua and the Sudan[11] disclose that persons displaced by changing crops or technologies fanned out to other rural areas in search of work. At least in the case of migrants from rural Bolivia and Nicaragua, the migrants going to cities are the more selective migrants. The poorer, uneducated migrants in search of work move to other rural areas often in repeated, cyclical moves.

Undoubtedly, in each area some displaced by tractorization or eviction migrate to cities, while others look for other rural opportunities. The magnitude of rural-rural migration depends upon the nature of rural opportunities. If "frontier" areas are accessible, migrants may try their luck there. But at least two studies, in Indonesia and Venezuela, show that these rural-rural frontier migrants are highly selective.[12] The less selective rural-rural migrants move from place to place or on contract to one plantation. Again, the choice of any given rural area may depend upon labour team recruiters coming to an area or on possibilities for share-cropping or other tenancy agreements in alternative rural areas.[13]

The following specific agricultural development policies and "non-policies" have tended to push small farmers and landless labourers literally out of their home rural areas.

No technological assistance or credit as a follow-up to land reform

A 1974 survey of land reform programmes in a wide range of countries concludes that only a handful of countries have implemented land reform programmes which substantially improved the small farmer's equity, income and security.[14] Far more common is the circumstance in which reform programmes do not substantially raise peasant incomes. Griffin suggests that one reason that land reform in this latter group of countries has not worked is because credit, advice and other supports were not made available to the new small land-owners.[15] If the land reform simply adds to the small-farmer class without providing credit, technological assistance and other agricultural inputs, reform beneficiaries may continue to lag behind the large-scale and medium-sized farmers. As the middle-sized farmers become relatively more prosperous, post-reform income disparities will grow, not diminish. Studies have shown that this lag and increased gap may ultimately cause the small farmer, tenant or labourer to leave agriculture, as exemplified in Bolivia, Guatemala, Mexico, India, Pakistan, the Philippines, Thailand, Ethiopia and the Ivory Coast.[16]

With or without land reform, small farmers and tenants may be able to increase their output only if they have adequate title to land or security of tenure.[17] Without secure title and tenure, farmers have little incentive to apply for loans because they have no guarantee that they will reap the benefits of their investment. The lack of title or tenure has inhibited the adoption of new technology in Colombia, India and Malaysia, among other countries.[18]

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[9] Ibid., pp. 248–250; and Iftikhar Ahmed, "The green revolution and tractorisation: their mutual relations and socio-economic effects", *International Labour Review*, vol. 114, No. 1 (July–August 1976), pp. 83–93.

[10] Linda K. Romero and William L. Flinn, "The effects of structural and change variables on the selectivity of migration: the case of a Colombian peasant community", *Inter-American Economic Affairs*, vol. 29, No. 4 (Spring 1976), pp. 35–38; Guy Standing and Fred Sukedo, "Labour migration and development in Guyana", *International Labour Review*, vol. 116, No. 3 (November/December 1977); pp. 303–313; P. de Mas, "The place of peripheral regions in Moroccan planning", *Tijdschrift voor Economische en Sociale Geografie*, vol. 69, Nos. 1–2 (1978), pp. 89–92; for India and Papua New Guinea, "Responses to population pressure in the Papua New Guinea Highlands", *Oceania*, vol. 48, No. 4 (1978), pp. 284–298; for the Philippines and Thailand, K. Griffin, loc. cit., p. 250; Lionel Cliffe, "Labour migration and peasant differentiation: Zambian experiences", *Journal of Peasant Studies*, vol. 5, No. 3 (1978), pp. 326–346.

[11] Scott Whiteford and Richard N. Adams, "Migration, ethnicity, and adaptation: Bolivian migrant workers in north-west Argentina, in Brian M. DuToit and Helen I. Safa, eds., *Migration and Urbanization* (The Hague, Mouton, 1975), pp. 179–199; J. Bonnemaison, "The impact of population patterns and cash cropping on urban migration in the New Hebrides", *Pacific Viewpoint* (Wellington), vol. 18, No. 2 (1977), pp. 119–129; Bernard Nietschmann, "Ecological change, inflation and migration in the far west Caribbean", *Geographical Review*, vol. 69, No. 1 (January 1979), p. 21; and Just Faaland, "Growth, employment and equity: lessons of the employment strategy mission to the Sudan", *International Labour Review*, vol. 114, No. 1 (July–August 1976), p. 5.

[12] William S. Johnson, Ahmad Sanusi and Joseph B. Tamney, "Transmigration potential in Indonesia", in Smithsonian Institution, *The Dynamics of Migration: Internal Migration and Migration and Fertility*, Interdisciplinary Communications Program Occasional Monograph Series, No. 5, vol. 1 (Washington, D.C., 1976), pp. 41–76; and Mary E. Conaway, "Circular migration in Venezuelan frontier areas", *International Migration*, vol. XV, No. 1 (1977), pp. 35–42.

[13] Labour contractors recruiting Bolivians for lowland cotton-picking are discussed by Allyn MacLean Stearman, "The highland migrant in lowland Bolivia: multiple resource migration and the horizontal archipelago", *Human Organization*, vol. 37, No. 2 (Summer 1978); pp. 180–185; and S. Whiteford and R. N. Adams, loc. cit. Visiting tenants in the Gambia are discussed by Ken Swindell, "Family farms and migrant labour: the strange farmers of the Gambia", *Canadian Journal of African Studies*, vol. 12, No. 1 (1978), pp. 3–17.

[14] John D. Montgomery, "Allocation of authority in land reform programs: a comparative study of administrative processes and outputs", in Agricultural Development Council, *Research and Training Network* (New York, 1974), p. 10.

[15] K. Griffin, loc. cit, pp. 246–249.

[16] John M. Cohen, "Rural change in Ethiopia: the Chilalo Agricultural Development Unit", *Economic Development and Cultural Change*, vol. 22, No. 4 (July 1974), pp. 580–614; for Bolivia, J. Fernandez, loc. cit.; and for other countries, K. Griffin, loc. cit., pp. 249–251.

[17] Peter Dorner, "Land tenure, income distribution and productivity interactions", *Land Economics*, vol. XL, No. 3 (August 1964).

[18] See, respectively, Luis Arévalo-Salazar, "The legal insecurity of rural property in Colombia: a case study of the notarial and

Additionally, studies in Bolivia, Brazil, Chile, Mexico, the countries of Middle America, Peru and Nigeria show that large landholders often use less labour-intensive production techniques, perhaps because they practise extensive cultivation, such as grazing over large land areas.[19] As a result, if a large share of the land is held by few land-owners, there are fewer opportunities for agricultural employment, and migration ensues.

Restrictive bank loan policies

Although Bangladesh, India and Pakistan have a wide network of co-operative societies making loans to farmers, the savings and collateral requirements have tended to limit credit to all but the middle-sized and large-scale farmers.[20] Where small-scale farmers have not had access to commercial credit they have been unable to invest in new land or equipment. Large-scale farmers, for example, in Chile, Guatemala, Mexico, India, the Philippines, Ethiopia and Kenya[21] received loans to raise output that were often unavailable to small farmers. The ensuing gap in productivity and incomes has no doubt led to out-migration of the poor and underemployed.

Research and development focus on crops requiring specialized inputs

Many national agricultural research and development policies have focused on capital-intensive production methodologies and crops. The resulting innovations explicitly favour large-scale farmers, especially those raising export crops and may actually be inappropriate for small farms. For example, many of the high-yielding varieties need more water than the older seed varieties. In Mexico, India, Pakistan, the Philippines, Morocco and the Sudan,[22] new varieties have been most widely used in the irrigated or well-watered regions which were comparatively prosperous prior to introduction of the new varieties. Areas with less water have been unable to match the productivity gains of regions combining irrigation with high-yielding varieties, fostering a relative income decline and migration from the more arid locales to the irrigated areas or to cities. In the Sudan, every year 25 per cent of the adult population moves in search of work.

Subsidized agricultural mechanization

Ahmed makes a strong case that it is tractorization, rather than the green revolution *per se*, which leads to rural unemployment and tenant evictions. He shows that the high-yielding varieties were most widely adopted in areas that had previously undergone heavy tractorization.[23]

To enable farmers to buy the tractors and equipment deemed essential to raising the productivity and prestige of farming, many Governments reduced interest rates for these purchases or even provided direct subsidies. (Ahmed subsequently shows that tractors add little to green-revolution productivity gains.) In Pakistan, tractors were almost one half the price charged in the United States of America.[24] Subsidized mechanization has resulted in a preference for tractors over labour in Ethiopia, Nigeria, India, the Philippines, Brazil, Colombia, Honduras and Mexico.[25] Because of their easier access to credit and their ownership of large acreages on which to use tractors, large land-owners in the Punjab (India), the Philippines, Sri Lanka and other countries of Asia have been the first to buy tractors. Many have then evicted tenants. Thus, tractor ownership has accelerated the process of land concentration and the shift to wage agricultural labour. But because the tractors reduced the demand for labour (there is little evidence that tractors have actually been much used for multiple cropping) tractors can be said to have pushed many farmers off their farms and into the towns or other rural areas in search of work.

Pricing policies for agricultural commodities

Agricultural export taxes, such as those imposed by the Nigerian Marketing Board, disproportionately tax

registry systems", Land Tenure Center Research Paper, No. 45, Madison, Wisconsin, University of Wisconsin, 1972; P. Dorner, loc. cit., pp. 26–27 and Yukon Huang, "Risk, entrepreneurship, and tenancy", *Journal of Political Economy*, vol. 81, No. 5 (October 1973), p. 1242.

[19] R. Paul Shaw, "Land tenure and rural exodus in Latin America", *Economic Development and Cultural Change*, vol. 23, No. 1 (October 1974), pp. 123–130.

[20] For documentation of the Bangladesh and Pakistan cases, see James E. Kocher, *Rural Development, Income Distribution and Fertility Decline*, Occasional Paper (New York, The Population Council, 1973), p. 23; and for India, Edgar Owens and Robert Shaw, *Development Reconsidered: Bridging the Gap Between Government and People* (Lexington, Massachusetts, Lexington Books, 1972), pp. 76–81.

[21] Hugh L. Cook and Theodore Cook, "Organization of trade in one tropical municipality of Vera Cruz, Mexico", Land Tenure Center Research Report, No. 48, Madison, Wisconsin, University of Wisconsin, 1972, pp. 7–9; for Chile and Guatemala, R. P. Shaw, loc. cit., pp. 123–130; for countries of Asia, K. Griffin, loc. cit., pp. 244–246; and for countries of Africa, Uma Lele, *The Design of Rural Development: Lessons from Africa*, published for the World Bank (Baltimore, Maryland, Johns Hopkins University Press, 1975), p. 59.

[22] For Morocco, P. de Mas, loc. cit., p. 92; for the Sudan, J. Faaland, loc. cit., pp. 5–7; and for other countries listed, K. Griffin, loc. cit.

[23] I. Ahmed, loc. cit., pp. 83–93.

[24] E. Owens and R. Shaw, op. cit., pp. 56–57.

[25] See Derek Byerlee and Carl K. Eicher, "Rural employment, migration, and economic development: theoretical issues and empirical evidence from Africa", African Rural Employment Working Paper, No. 1, East Lansing, Michigan, Michigan State University, Department of Agricultural Economics, 1970; Peter Lobstein, "Prerequisite for rural employment policy in French-speaking Black Africa", *International Labour Review*, vol. 102, No. 2 (August 1970), pp. 171–189; K. Griffin, loc. cit., pp. 247–250; E. Owens and R. Shaw, op. cit., pp. 56–62; and Stanley D. Brunn and Robert N. Thomas, "The migration system of Tegucigalpa, Honduras", in Robert N. Thomas, ed., *Population Dynamics of Latin America: A Review and Bibliography* (American Association of Latin Americanist Geographers, 1971), p. 66.

agriculture to pay for urban industrial development.[26] More common among the countries of Africa, these taxes are often levied most heavily on labour-intensive primary products, discouraging rural employment by reducing the incentive to expand production of these crops. More importantly, export taxes on agricultural products depress producer incomes, widening the rural-urban income gap and promoting migration. Low producer incomes also restrict the rural demand for consumer goods, which in turn limits the potential for production of non-agricultural goods in rural areas. Either way, export taxes clearly handicap rural development efforts.

Alternatively, Governments subsidize the urban consumer by paying prices below parity or below the world market to farmers and/or importing food for sale at prices below those charged by local farmers. Both act as a disincentive to food production and make the migration option all that much more attractive or necessary, as the case may be. Until recently, for example, Sierra Leone subsidized urban rice prices to prevent loss of urban purchasing power, but the policy kept rice farmers' incomes low and they lost incentive. Recently, the Government raised rice prices, but until then migration was a preferred option to rice-farming, especially among young school-leavers.[27] And in the Republic of Korea, a strong correlation has been shown between prices below parity and high rates of rural-urban migration between 1963 and 1970: when prices rose in 1970, rural-urban migration also tapered off.[28] In fact, the setting of low prices for agricultural commodities is one of the few policies for which there is uniform agreement among analysts on a direct relation between policy and migration.[29]

Underinvestment in rural roads and other infrastructure

Lack of appropriate services and infrastructure has hindered efforts to increase rural incomes. Farmers need roads, markets, supply stores, electricity and water to change their ways of farming. Governments have attempted to supply these services; but often, as in Mexico, only in designated project areas which restricts benefits to the large land-owner project participants.[30] The lack of infrastructure has hampered rural development efforts in El Salvador, Honduras, Mexico, Bangladesh, Ethiopia, Malawi, the Niger and the United Republic of Cameroon.[31] Where rural development has not provided access to adequate services among farmers, income and employment opportunities have not expanded; and seasonal, circular or long-term migration has become more likely.

Large areas of arable land cannot be used to their full potential due to inadequate or irregular rainfall. To open these lands to cultivation or to stabilize and increase the productivity of existing farms, Governments throughout the world have undertaken both minor and major irrigation projects. Recent evaluations of the socio-economic consequences of several major irrigation schemes show that these projects have generally increased income disparities within and between irrigated and non-irrigated zones.[32]

Accounts of projects in Guyana, Mexico and the Sudan describe a process of land consolidation among medium-scale or large-scale farmers, who through political pressures or differential access to credits are able to increase their incomes substantially.[33] Thus, projects may show net income and productivity gains, but with a decreasing share of the rural income going to the small farmers or the landless.

Irrigation projects have mixed migration consequences. On the one hand, major irrigation projects stimulate massive seasonal, wage-labour migrations into the area. Most of these migrants are less selective, rural-rural migrants who either move from job to job or seasonally to supplement earnings from their own land. The other major migration consequence of irrigation schemes is an outflow of small farmers who

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[26] Derek Byerlee, "Research on migration in Africa: past, present and future", African Rural Employment Paper, No. 2, East Lansing, Michigan, Michigan State University, Department of Agricultural Economics, 1972, p. 13.

[27] Derek Byerlee, Joseph L. Tommy and Habib Fatoo, "Rural-urban migration in Sierra Leone: determinants and policy implications", African Rural Economy Paper, No. 13, Njala, Sierra Leone, University of Sierra Leone, Njala University College; and East Lansing, Michigan, University of Michigan, Department of Agricultural Economics, 1976.

[28] Rex D. Rehnberg, "Agricultural price policy and rural-to-urban migration: the recent South Korean experience", *Journal of Developing Areas*, vol. 11, No. 4 (July 1977), pp. 509–518.

[29] See also Henry Rempel and Richard Lobdell, "The rural impact of rural-urban migration", prepared for the International Labour Office, University of Manitoba, Department of Economics, 1976; and J. Barry Riddell, "On structuring a migration model", *Geographical Analysis*, vol. 2, No. 4 (1978), pp. 241–260.

[30] David Barkin, "Regional development and interregional equity: a Mexican case study", in Wayne A. Cornelius and Felicity M. Trueblood, eds., *Urbanization and Inequality: The Political Economy of Urban and Rural Development in Latin America*, Latin America Urban Research Series, vol. 5 (Beverly Hills, California, Sage Publications, 1975), pp. 286–297.

[31] World Bank, "Informe general sobre el desarollo agropecuario y rural de El Salvador", prepared jointly with the Inter-American Development Bank (IOB) and the United States Agency for International Development (AID), Washington, D.C., December 1976; World Bank, "Honduras agricultural/rural sector survey: vol. 1, general report", working paper No. 971-HO prepared jointly with IDB and AID, Washington, D.C., January 1978; H. L. Cook and T. Cook, op. cit., p. 45; Eric Chetwynd, Jr. and Michael Farbman, "Market town development and employment promotion in Bangladesh", draft paper prepared for the United States Agency for International Development Bangladesh Mission by the Office of Urban Development of the Agency for International Development; and for countries of Africa, U. Lele, op. cit.

[32] For evaluations of irrigation projects, see: for Guyana, G. Standing and F. Sukedo, loc. cit.; for India, I. Ahmed, loc. cit; J. Hinderink and G. J. Tempelman, "Rural inequality and government policy: a case study of the river basin of the Bou in northern Ivory Coast", *Tijdschrift voor Economische en Sociale Geografie*, vol. 69, Nos. 1–2 (1978), pp. 58–67; Michael M. Cernea, "Measuring project impact: monitoring and evaluation in the PIDER rural development project—Mexico", World Bank Staff Working Paper, No. 332, Washington, D.C., 1979; for Morocco, P. de Mas, loc. cit.; for Peru, Craig C. Dozier, *Land Development and Colonization in Latin America: Case Studies of Peru, Bolivia, Mexico* (New York, Praeger Publishers, 1969); for the Sudan, J. Faaland, loc. cit.

[33] See appropriate references in footnote 32.

have no access to water and cannot survive on their current income or who have been bought out or evicted by the land-owners with irrigation. If they continue to till their own land, this migration is likely to be seasonal or circular. Otherwise, out-migration may be long term to other rural or urban areas. In Guyana, for example, development of irrigated rice-growing areas has resulted not in a decrease but an increase in rural out-migration, much of it rural-urban.[34]

Establishment of formal, urban-oriented educational programmes

Perhaps the most well-known governmental action that unintentionally has spurred rural-urban migration has been the establishment of schools in rural areas. Study after study documents the pervasive influence that schooling has had on rural youth. In the United Republic of Tanzania, for example, rural males aged 20–24 with five or more years of schooling are 10 times more likely to move to cities than similar males with less or no education.[35]

In general, persons with schooling are more likely to migrate to cities, either to find suitable non-agricultural jobs or to continue their education. In some circumstances, however, having education is not a sufficient condition to induce migration. One study[36] shows that if the urban job market practises educational credentialism, rural-urban migration rates drop, particularly among the uneducated or little educated. In the United Republic of Tanzania, migration rates for those with less than four years of schooling differ little from those for the uneducated, largely due to the fact that the urban wages for those with only a little schooling are roughly equivalent to wages for those with no education.[37] Studies in Chile, Honduras and Mexico also show that the less educated rural migrants are more likely to move to other rural areas.[38]

Summary of migration consequences of capital-intensive agricultural development strategies

Each of the programmes (or non-policies) outlined above has affected rural migration patterns. But the effect has been neither immediate nor uniform for all rural residents.

Programmes that dramatically increased seasonal labour demands have stimulated wage-labour migration into the area that has undergone the changes. With the exception of colonization schemes, irrigation schemes allowing introduction of a new cash crop have been the predominant mode by which this has been accomplished. Examples of such projects can be found in Colombia, India, the Ivory Coast, Kenya, Morocco and the Sudan.

At the same time, other governmental actions or non-actions have swelled the ranks of the landless or near landless who can no longer survive without moving to other rural or urban labour markets. A recent survey of landlessness throughout the developing world shows that almost 75 per cent of the rural population in the countries surveyed were landless or near landless. Most of these persons have little choice but to look for work wherever they can find it, which means continual searching, both near and far from home, primarily in rural areas.[39]

The following programmes or actions appear to have exacerbated the situation by increasing income disparities within rural areas, by reducing rural employment demands or by generally depressing rural incomes:

(*a*) No follow-up to land reform: new land-owners remain impoverished or are squeezed out by the larger farmers who use political or economic power to capture control of necessary inputs;

(*b*) Restrictive bank loan policies;

(*c*) Technological innovations not accessible to, or appropriate to, the smaller farmers;

(*d*) Below-parity agricultural commodities prices;

(*e*) Underinvestment in rural roads and infrastructure;

(*f*) Tractorization.

Excluding the last programme listed, each of these policies tends to put smaller farmers at a disadvantage in relation to the medium- or large-scale farmer. Not only does this disadvantage imply lower incomes for small farmers, it also limits their ability to expand production, thereby reducing the demand for wage labour. Particularly in areas where land is very inequitably distributed and most farms are very small, the demand for hired labour is limited. Simultaneously, small farmers are forced to compete with the landless for off-farm work, as has been demonstrated for India.[40] Thus, small farms with low productivity only increase the likelihood of rural out-migration, either by the landless or by the small farmers who cannot supplement their farm earnings in their home community.

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[34] G. Standing and F. Sukedo, loc. cit.

[35] N. N. Barnum and R. H. Sabot, "Education, employment probabilities and rural-urban migration in Tanzania", *Oxford Bulletin of Economics and Statistics*, vol. 39, No. 2 (May 1977), p. 115.

[36] Gary S. Fields, "Rural-urban migration, urban unemployment and underemployment, and job search activities in LDC's", *Journal of Development Economics*, vol. 2, No. 2 (July 1975), pp. 165–187.

[37] N. N. Barnum and R. H. Sabot, loc. cit., p. 115.

[38] See, respectively, Arthur M. Conning, "Rural-urban destinations of migrants and community differentiation in a rural region of Chile", *International Migration Review*, vol. 6, No. 2 (Fall 1972), pp. 148–157; S. D. Brunn and R. D. Thomas, loc. cit.; and Arlene C. Rengert and George F. Rengert, "Who moves to cities? A multivariate examination of migrants from rural Mexico", prepared for the Annual Meetings of the Population Association of America, New Orleans, Louisiana, 1973.

[39] Milton J. Esman, "Landlessness and near-landlessness in developing countries", prepared for the United States Agency for International Development, Office of Rural Development, Project #931-17-998-001-73; Ithaca, New York, Cornell University, Rural Development Committee, 1978.

[40] Mark R. Rosenzweig, "Rural wages, labor supply, and land reform: a theoretical and empirical analysis", *American Economic Review*, vol. 68, No. 5 (December 1978), pp. 847–861.

While those programmes listed above have exacerbated the forces leading to rural-rural or rural-urban migration among the very poor, establishing schools in rural areas unintentionally has done much to stimulate out-migration by the more selective rural youth who are fortunate enough to obtain a few years of schooling. Ironically, these schools were often promoted for the very reason of educating a cadre of rural leaders who would hasten rural development. Contrary to expectations, even the new rural bourgeoisie who have benefited from agricultural commercialization encourage their sons to attend school and try for urban careers.

C. Integrated rural development programmes

As a consequence of the unexpected employment and migration effects of capital-intensive agricultural development programmes described above, many Governments have charted a new course with the objective of including more small-scale farmers in the benefits of development. Rather than focusing on average income and productivity gains, the new programmes are concerned with the distribution of employment and income gains. The perspective in the new type of programme has shifted from farm output to the farmers themselves. Thus, the new programmes include investment in human capital. In the new model of development, rural development depends upon the participation and contributions of both small and large farmers. Because of their mutual focus on the economic and social aspects of development the new programmes are called "integrated rural development programmes".

Integrated rural development strategies often have secondary goals of slowing rural-urban migration. Because migrants generally leave when they lack jobs or adequate income, increasing the range of agricultural and non-agricultural job opportunities and raising incomes is expected to reduce the number of migrants. Where agricultural development strategies have failed to slow the drift to urban areas, it is hoped that rural development programmes will succeed. It is no surprise that the integrated rural development programmes are popular among agencies and Governments that have problems coping with metropolitan growth. Some of the Governments pursuing integrated rural development are India, the Philippines, Thailand, Colombia, Costa Rica, Mexico, Nicaragua, Kenya, Nigeria, Senegal and the United Republic of Tanzania.[41]

The integrated rural development schemes adopt a multisectoral approach. Experience with previous agricultural development programmes indicates that benefits had been limited to the medium or large-scale farmer in part because the programme focus had been too narrow. The new integrated rural development programmes recognize the complex, interlocking web of support required to involve a broader spectrum of the rural population in continuing economic growth and development.

Although the specific components of integrated rural development schemes vary from project to project, most schemes include a mix of the following programmes:

(*a*) Supported land reform;

(*b*) Supervised credit for small farmers with locally adapted agricultural inputs and extension;

(*c*) Labour-intensive agricultural innovations;

(*d*) Complementary and co-ordinated provision of physical infrastructure, especially roads;

(*e*) Development of a marketing network for inputs and produce;

(*f*) Rural vocational training and education for self-help;

(*g*) Expansion of off-farm employment opportunities;

(*h*) Creation of rural market-towns as the loci for linkages between the farm and non-farm sectors.

Each of these major policy components is discussed below.

Obviously, with so many project components, project planning, co-ordination and implementation are of major concern. A major premise of integrated rural development programmes is that the objectives cannot be achieved unless the programme inputs are co-ordinated in space and time. Due to the insubstantial expense of providing these inputs simultaneously, these new types of programmes are implemented only in certain designated regions, often with plans to expand later to other regions. Currently, the PIDER project in Mexico has the broadest geographical coverage. It is also one of the most expensive endeavours of its type.

To date, there are few evaluations of the new integrated rural development schemes. Most are still very much ongoing and subject to periodic review and modification. Therefore, the discussion of project out-

[41] For descriptions of these programs, see: Lalit Sen, ed., *Readings in Micro-Level Planning and Rural Growth Centres* (Hyderabad, India, National Institute of Community Development, 1972), p. 4; Carroll P. Streeter, "Reaching the developing world's small farmers", special report from the Rockefeller Foundation, New York, 1973, p. 7; Robin J. Pryor, "Population redistribution and development planning in Southeast Asia", paper submitted to the International Geographical Union New Zealand Regional Conference, Palmerston North, Massey University, 1974, pp. 12–15; Gene M. Owens and Wayne Weiss, "Institutionalizing local participation for agrarian development: the ASIP model and new Latin American experiences", paper prepared for the Annual Conference of the American Society for Public Administration, Chicago, Illinois, 1975; Albert L. Brown and others, "Invierno: the first year", evaluation of United States Agency for International Development loan 524-T-031, October 1976; Judith Heyer, Dunston Ireri and Jon Moris, *Rural Development in Kenya* (Nairobi, Kenya, East Africa Publishing House, 1971); Vincent Austin, "Approaches to rural development: lessons of a pilot project in Nigeria", *International Labour Review*, vol. 114, No. 1 (July/August 1976), pp. 61–68; U. Lele, op. cit., pp. 159–197; and Klaas de Jonghe, "Rural development and inequality in Casamance (southern Senegal)", *Tijdschrift voor Economische en Sociale Geografie*, vol. 69, Nos. 1–2 (1978), pp. 68–77.

comes, particularly with respect to migration, is based on either the preliminary or mid-project evaluations or the expected consequences, given the migration assumptions outlined above. As such, the conclusions should be regarded as tentative, pending availability of subsequent evaluations.

Supported land reform

As shown above, land or tenancy reform without explicit assistance to the new small land-owners is often followed by a reconsolidation of farm holdings and a re-emergence of inequalities in land ownership. If the reform beneficiaries are provided with credit, assistance in preparing farm plans and using improved practices and marketing assistance, the reform is more likely to result in a lasting redistribution of wealth and more widely shared productivity increases.[42]

In all or parts of Chile, Mexico, Venezuela, Indonesia, Iran, Japan, the Republic of Korea, Taiwan Province, Thailand, Viet Nam, Benin, Kenya, the Sudan, the former United Arab Republic (now the States of Egypt and the Syrian Arab Republic), the United Republic of Tanzania and Romania,[43] land reform has been accompanied by credit, assistance and other supports, allowing participating small-scale farmers to make substantial improvements in their productivity and income.

Owens and Shaw suggest that, at a minimum, countries should implement tenancy reform. Fixed rents and secure tenancy in Ecuador, central Luzon (the Philippines), Sri Lanka and Taiwan Province[44] have allowed tenants to adopt innovations without fear that the benefits of their investments and hard work will be lost to others. Small farmers can more easily provide collateral for loans if they can easily gain clear title to lands. In Colombia, El Salvador and Kenya,[45] for example, simplified and inexpensive access to title would enable many small farmers to buy and sell land and to qualify for agricultural credit.

Assessments of supported land reform programmes have generally covered only the income and productivity gains accruing from reform; conclusions concerning migration changes only can be made indirectly. Although supported land reform certainly will not stop the flow from rural areas, if improved incomes and rural employment opportunities slow rural out-migration, then countries with effective land reform programmes should exhibit diminishing migration among the reform beneficiaries. Analysis of reform impacts in Kenya, Sri Lanka and Venezuela[46] show that migration has been slowed; but in Bolivia and Mexico, out-migration from land reform areas has not substantially abated.[47] Although migration from these areas may have lessened immediately after the reforms, continued population growth has led to fragmentation of the reform beneficiaries' holdings, recreating for the succeeding generations the situation of uneconomic farms. Where subdivision among heirs has been prohibited, only one child can get the land; and others have been compelled to leave to find work elsewhere. These findings suggest that reduced out-migration may be limited only to first-generation reform beneficiaries and that without continuing development efforts, including access to off-farm jobs to supplement farm earnings, even supported land reform may have only short-term migration consequences.

Land reform may also change the family's pattern of labour allocation. In the pre-reform period in Peru, peasants were able to increase their incomes only by providing more labour for the hacienda owner. After the reform in 1976, those households which were not able to purchase adequate, higher quality farmlands could no longer support themselves, because their own farm yields were inadequate; yet, excess labour could no longer be employed on the hacienda. As a result, sons were encouraged to leave; and migration rates actually increased.[48]

The Bolivian, Mexican and Peruvian cases demonstrate that supported land reform may reduce out-migration for the new land-owners who are better able to take advantage of the new technologies, but for some land-ownership still does not guarantee an adequate income. Those most likely to adopt some form of post-reform migration are the farmers who were at the bottom of the pecking order when land was portioned out or the second and subsequent generations of the reform beneficiaries.

Supervised credit for small farmers

Programmes of supervised credit for small farmers make agricultural credit available in such a way that risks to the borrower and lender are less than under traditional systems. In the INVIERNO programme in Nicaragua, farmers may choose between loans that entail no fertilizer use and loans that require adoption of a complete package of innovations.[49] Another risk-

[42] P. Dorner, loc. cit., p. 19.

[43] For Chile, Iran, Japan, Mexico, the Republic of Korea, Taiwan Province, Venezuela and Viet Nam, see J. D. Montgomery, loc. cit., pp. 4–6; for Indonesia and Thailand, R. J. Pryor, op. cit., pp. 2–17; Eric S. Clayton, "Agrarian reform, agricultural planning, and employment in Kenya", *International Labour Review*, vol. 102, No. 5 (November 1970), p. 435; and for other countries of Africa and Romania, P. Dorner, loc. cit., pp. 49–57.

[44] For Ecuador, see Development Alternatives, Inc., "14 case study summaries of small farmer and rural development projects in Latin America", prepared for the Office of Rural Development of the United States Agency for International Development, Arlington, Virginia, 1975, p. I.4; and for countries of Asia, E. Owens and R. Shaw, op. cit., p. 89.

[45] See, respectively, L. Arévalo-Salazar, op. cit.; World Bank, "Informe general sobre el desarollo agropecuario y rural de El Salvador"; and E. S. Clayton, loc. cit.

[46] See, respectively, E. S. Clayton, loc. cit.; E. Owens and R. Shaw, op. cit.; and John R. Mathiason and Eric B. Shearer, "Caicara de Maturin: case study of an agrarian reform settlement in Venezuela", CIDA Research Papers on Land Tenure and Agrarian Reform, No. 1, 1967.

[47] See, respectively, J. Fernandez, loc. cit., p. 317; and Jonathan King, "Interstate migration in Mexico", *Economic Development and Cultural Change*, vol. 27, No. 1 (October 1978), pp. 94–95.

[48] C. D. Deere, loc. cit., p. 430.

[49] A. L. Brown and others, op. cit., pp. 51–53.

reduction technique is the provision of credit to groups rather than individuals. A second factor that increases the likelihood of productivity gains is supervision, under which the farmer draws up a plan outlining how the loan will be used; and no loans are granted unless the plan is approved. The supervision may also include actual technical assistance in adopting new farm techniques. Lastly, the supervised credit programme can also confront the problem of input availability and product markets, ensuring that the loan can be used for the intended purpose and that the resulting production can be sold.[50]

Although coverage is generally limited to special project areas, several countries have implemented supervised credit programmes for small farmers. Examples of such integrated credit programmes are Operaçao Tatu in Brazil, Instituto Colombiano Agropecuario in Colombia, Fundación Promotora de Cooperativos in El Salvador, Puebla in Mexico, Small Farmer Development Agencies in India,[51] ASAR in Bolivia, FECOAC in Ecuador, CREDICCOA in Paraguay,[52] INVIERNO in Nicaragua,[53] the Chilalo Agricultural Development Unit (CADU) in Ethiopia, Small Farmer Credit in Kenya, the Lilongwe Land Development Programme in Malawi, Zones d'actions prioritaires intégrées (ZAPI) in the United Republic of Cameroon;[54] and projects sponsored by the World Bank in the Gambia, Malawi and Mexico.[55]

Designing an extension strategy to reach the smallest farmers is critical to the success of a supervised credit scheme. One technique that has worked well in a number of projects is the model-farmer approach, where the agent and community select one or a few farmers to demonstrate the improved seeds and techniques. This programme can also be used to match the innovations to local conditions more appropriately. Evaluations of these projects indicate that supervised credit for small farmers has enabled them to increase their production, both by expanding the area cultivated and by adopting improved production techniques and inputs. Programme evaluations for projects in Brazil, Colombia, Ethiopia, the Gambia, Kenya, Malawi, Mexico, Nicaragua and the United Republic of Cameroon report income gains for participating farmers.

Despite the emphasis on small-scale farmers, however, not all programmes have succeeded in reducing the differential between the incomes of small and large land-owners. In the PIDER programme in Mexico, the more impoverished peasants are less likely to participate than the larger farmers, in part because they are more likely to own non-irrigated lands for which yield increases of the innovations were overestimated. The programme has helped to prevent further income declines; but in order to raise their income, these farmers still must tap alternative non-farm income sources.[56] In Kenya, a dairy-cattle improvement scheme failed to involve the poorest farmers, because the loan amounts did not fully cover the cost of the new cows. Because the cows had a 20 per cent mortality rate, the poorer farmers could not risk taking out loans.[57] In Senegal, a banana project designed to involve both large and small land-owners benefited primarily the larger land-owners, because participants were selected by a community council; and the politically powerful larger land-owners were able to exclude the young men, women and smaller land-owners.[58] In all of the examples given above, the supervised credit schemes led to broader, not narrower, income disparities, despite programme designs directed equally towards small and large farmers. It is clear that project outcome will not necessarily match intention, particularly if other socio-political factors prevent the small farmers from having access to or use of the credit.

Very few supervised credit programme evaluations include the migration variable. In Brazil, Operaçao Tatu has slowed out-migration,[59] and ZAPI in the eastern part of the United Republic of Cameroon has probably contributed to the retention of a high proportion of the adult population of the area.[60] Where supervised credit has permitted small farmers to increase their income substantially, a diminution of seasonal or circular rural-rural migration is expected. In areas in which rural-urban migration has predominated, those changes could reduce such migration. Supervised credit schemes that do not simultaneously increase the demand for wage labour cannot be expected to alter migration patterns among the landless.

In the long run, income gains among the lower and middle echelons of farmers may facilitate increased rural-urban migration, because these farmers will then have money to invest in educating their children, who will be sent to town for school and work. In Senegal, for example, households that co-operate in the banana project are 1.25 times more likely to have members migrate to town for study. Because the income of the banana co-operators is four times higher than that of the peanut farmers, the co-operators can afford to pay for more education. Hence, their children are more likely to be well-educated and to stay in town

[50] Thomas E. Carroll, "Group credit for small farms", *Small Farmer Credit: Analytical Papers*, vol. XIX; *Spring Review*, Washington, D.C., United States Agency for International Development, 1973, pp. 263–279.

[51] C. P. Streeter, op. cit.

[52] Development Alternatives, Inc., op. cit.

[53] A. L. Brown and others, op. cit.

[54] U. Lele, op. cit.

[55] World Bank, "Fourth annual review of project performance audit results", Washington, D.C., 1978; and M. P. Cernea, op. cit.

[56] M. P. Cernea, op. cit., pp. 56–62.

[57] Edward D. Harmon, Jr. and Tom Zalla, "A USAID sponsored evaluation of the Vihiga Special Rural Development Project, Kenya", Washington, D.C., United States Agency for International Development, 1974.

[58] K. de Jonghe, loc. cit., pp. 73–74.

[59] C. P. Streeter, op. cit., p. 12.

[60] United Republic of Cameroon, Société régionale de développement de zones d'actions prioritaires intégrées de l'est (ZAPI de l'est), "Projet de programme, exercise 1975-1976", B.P. 132, Bertoua, 1976.

pursuing urban-oriented careers.[61] Thus, if the intention is to "keep them on the farm", successful credit projects—particularly among the middle range of land-owners—may accomplish just the opposite within a few years.

Labour-intensive agricultural innovations

Because one of the major causes of rural out-migration is the lack of employment opportunities, strategies allowing more labour to be absorbed in agriculture would be expected to slow this migration. In fact, the expansion of employment opportunities is central to rural development.

The improved seed varieties require more labour inputs in the form of better soil preparation, weeding and application of fertilizer.[62] Instead of subsidizing the use of tractors and other labour-saving tools, farmers can be trained to use or hire more labour to accomplish these tasks. Several countries have adopted such training programmes and their implementation has increased output, for example, in India, Japan, the Philippines, and Taiwan Province.[63]

In many areas, season labour shortages constrain adoption of improved seeds or techniques. In the United Republic of Tanzania, for example, many women cannot adopt the new techniques because they dare not increase their already overloaded schedules during the peak season.[64] Additionally, tractors permit double or multiple cropping by enabling farmers to plow when the soil is too hard for traditional techniques. The selective introduction of tractors has increased employment and output in the Philippines, Taiwan Province, Thailand, the Ivory Coast, Kenya, Mali and Uganda.[65]

Small-scale implements may be used to reduce the drudgery of farm work and to increase labour productivity and income. Countries that have used small-scale implement programmes are the Gambia, Bangladesh, Pakistan and Taiwan Province.[66]

Selective mechanization permits farmers to increase acreage cultivated or adopt multiple cropping. It is generally income and employment generating, but its impact on out-migration is unclear. Fairly explicit evaluations of its effect on migration are available only for the Gambia, Malaysia, the Philippines, Taiwan Province and Thailand, where migration from farming areas has appeared to decelerate in response to the introduction of selective mechanization.[67]

Complementary and co-ordinated provision of physical infrastructure

Rural residents complain not only of the drudgery but of their isolation and low quality of life. The latter aspect is often cited as a factor driving young people to the cities. Integrated rural development strategies seek to create a social and physical infrastructure that permits rural residents to share broadly in the development benefits of the country. The types of physical infrastructure provided are roads, water-supply and electrification, while social infrastructure efforts include schools, clinics, housing, community buildings, marketing facilities and various social organizations.

Roads

Roads for market access are particularly important for rural development. Without access to the supplies and markets of other economic areas, farmers have neither the means nor the incentive to increase production. Johnson suggests that three types of roads are needed to meet different needs.[68] The "commuter route" carries daily traffic to and from work, allowing for clustering into villages. Without this clustering, households must live where they work, which drives the cost of infrastructure beyond the feasible, as several countries in Eastern Europe have discovered.[69] In turn, each village must be linked to a district market by "farm-to-market roads". Access to district markets permits the concentration of buyers and sellers, averting monopolistic or monopsonistic conditions. Lastly, these markets are linked to one another by "truck" roads, which allow each functional economic area to obtain goods and services from other areas. For example, farmers growing tomatoes can find a market among those growing corn, but only if there is access to a mutual market. These three types of roads create a structure for the local centralization which Johnson considers essential to rural development.

Countries with co-ordinated road-building programmes include India, Malaysia, the Philippines, Thailand, Kenya, Nigeria, Mexico and Nicaragua.[70]

[61] Carl Eicher and others, "Employment generation in African agriculture", Institute of International Agriculture Research Report, No. 9, East Lansing, Michigan, Michigan State University, 1970, p. 35.

[62] K. Griffin, loc. cit., pp. 243–246.

[63] See C. P. Streeter, op. cit., pp. 55–58; and S. E. Findley, *Planning for Internal Migration*, p. 87.

[64] Louise Fortman, "Women and Tanzanian agricultural development", Economic Research Bureau Paper, No. 77.4, Dar-es-Salaam, University of Dar-es-Salaam, 1978.

[65] See C. P. Streeter, op. cit., pp. 55–58; Henry T. Oshima, "A labor-intensive strategy for Southeast Asia: a multiple cropping model for the 1970's", paper prepared for the Southeast Asia Development Advisory Group of the Asia Society, Seminar on Labor-Intensive Strategies, Manila, University of the Philippines, July 1973; John C. de Wilde, "The manpower and employment aspects of selected experiences of agricultural development in tropical Africa", *International Labour Review*, vol. 104, No. 5 (November 1971), pp. 374–380; and E. S. Clayton, loc. cit., pp. 431–454.

[66] See C. Eicher and others, op. cit., p. 25; B. A. Stout and C. M. Downing, "Agricultural mechanisation policy", *International Labour Review*, vol. 113, No. 2 (March/April 1976), pp. 171–188; and H. T. Oshima, op. cit.

[67] See C. Eicher and others, op. cit.; R. J. Pryor, op. cit, pp. 12–18; and H. T. Oshima, op. cit.

[68] E. A. J. Johnson, *The Organization of Space in Developing Countries* (Cambridge, Massachusetts, Harvard University Press, 1970), pp. 235–241.

[69] "Planning and development of rural settlements" (ST/ECE/HBP/45), 24 May 1972.

[70] See E. A. J. Johnson, op. cit., pp. 336–340; Earl M. Kulp, *Rural Development Planning: Systems Analysis and Working Method* (New York, Praeger Publishers, 1970), pp. 131–142; R. J. Pryor, op. cit., pp. 12–16; E. D. Harmon and T. Zalla, op. cit.; Thomas T. Poleman, "Employment, population and food: the new

Road-building programmes exist in other countries, especially as public works or self-help endeavours, but the co-ordinated farm-to-market strategy is not always present.

In the short run, improved road access will most likely increase rural-urban migration. In Ghana, Honduras, Peru and Sierra Leone, there is direct evidence that persons living in communities on or near all-weather roads are much more likely to migrate to cities in search of work.[71]

However, if the community is near a city or market centre, a road may bring jobs in the cities within commuting range of rural residents. In Mexico, for example, young girls in the Yucatan can now walk to a resort in the vicinity for work.[72] Similar commutation patterns are observed in parts of Africa and in other countries of Latin America.[73]

In the long run, it is hoped that an improved rural road network will facilitate the creation of a modern agriculture. To the extent that this development would permit the smaller farmers to stay in farming full time without having to leave periodically in search of work, roads may slow rural out-migration. Overall, however, better road access enhances labour mobility and in general would increase migration into and out of the areas.

Water-supply

Many countries have programmes to assist self-help development of water-supply facilities; a few (e.g., Colombia, Ethiopia, Malaysia and Thailand) have major programmes covering large areas.[74] Aside from upgrading water quality and indirectly improving the health of the population, these projects are also designed to increase agricultural productivity and attract water-using industry to rural areas, thereby reducing the pressure for out-migration. However, one analysis of a water development programme in the United States of America finds little difference in migration rates from rural areas with and without water.[75] Outside the United States, there is also little evidence that good water-supplies alone may slow rural out-migration. Like other rural development programmes, however, they have a cumulative effect on incomes, employment and welfare; and may ultimately affect migration rates.

Electrification

The effect of electrification on migration is even more indirect than that of improved water-supplies. Most studies show that electrical consumption is concentrated in major urban centres, with most of the expansion of services occurring in those areas. Because the extension of electrical lines to every village is expensive, Johnson suggests that the most promising areas be selected for electrification in conjunction with provision of other infrastructure.[76] This proposal is currently being adopted in India under their growth-centre approach;[77] and in the Philippines, a rural electrification programme is already well under way.

An evaluation in 1977 of the nation-wide rural electrification programme in the Philippines concludes that households served by electricity are better off than households without electricity. The household heads average nine or more years of schooling, in comparison with six years for the heads of non-electrified households. Only one fourth are classified as poor, while over one half of the households without electricity are poor.

These differences imply that either the better-off households are able to obtain electrification before the other households, or the electricity promotes school attendance in some manner or they use electricity for income-generating activities.

Households with electricity claim that a major benefit has been the expansion of educational opportunities. (Schools and homes are lighted, permitting night-time study.) Also, 16 per cent of the households use electricity for business purposes, primarily small repair or service enterprises.

Perhaps because of the influence on education, electrified households are more likely to have migrant members than non-electrified households. Further, the migrants from the electrified households are more

hierarchy of development problems", *Food Research Institute Studies in Agricultural Economics, Trade, and Development* (Stanford University), vol. 11, No. 1 (1972); M. P. Cernea, op. cit.; and A. L. Brown and others, op. cit.

[71] John C. Caldwell, *African Rural-Urban Migration: The Movement to Ghana's Towns* (New York, Columbia University Press, 1969), p. 207; S. D. Brunn and R. N. Thomas, loc. cit.; Caesar Gonzmart, "Observations on Sierra-Coast migrations: the Ancash question", Washington, D.C., George Washington University, 1966 (unpublished paper); and James A. S. Blair, "Migration of agricultural manpower in Sierra Leone", *Tijdschrift voor Economische en Sociale Geografie*, vol. 68, No. 4 (1977), pp. 205–210.

[72] Mary Elmendorf, "The dilemma of peasant women: a view from a village in Yucatan", in Irene Tinker, Michelle Bramsen and Mayra Buvinić, eds., *Women and World Development*, report of the American Association for the Advancement of Science Seminar on Women in Development, Mexico, 1975 (New York, Praeger Publishers, 1976).

[73] See Aiden Southall, "Forms of ethnic linkage between town and country", in Williams Arens, ed., *A Century of Change in Eastern Africa*, World Anthropology Series (The Hague, Mouton, 1976), pp. 275–285; and R. N. Thomas and Kevin F. Byrnes, "Intervening opportunities and the migration field of a secondary urban center: the case of Tunja, Colombia", in R. J. Tata, ed., *Latin America: Search for Geographic Explanations*, Proceedings of the Fifth Conference of Latin Americanist Geographers, Boca Raton, Florida, 1974 (Chapel Hill, North Carolina, University of North Carolina, 1976), pp. 83–88.

[74] See Dale Adams, "Rural migration and cultural development in Colombia", *Economic Development and Cultural Change*, vol. 17, No. 4 (July 1969), pp. 527–539; Tesfai Tecle, "Rural development in Ethiopia: past, present and future", African Rural Employment Network, paper prepared for Debrezeit Conference, 1974; E. M. Kulp, op. cit., pp. 132–139; and R. J. Pryor, op. cit., pp. 12–18.

[75] John M. Carson, Goldie Rivkin and Malcom D. Rivkin, *Community Growth and Water Resources Policy* (New York, Praeger Publishers, 1973), pp. 46–63.

[76] E. A. J. Johnson, op. cit., pp. 271–273.

[77] Ibid.

likely to go to another town or city.[78] This response is consistent with the theory that educated persons are more likely to migrate and to choose urban destinations.

However, in one particular area, the Misamis Valley in the Philippines, electrification is linked to a slight reduction in rural out-migration. Electrification led to the creation of non-agricultural jobs, which enabled more would-be migrants to stay in the area.[79]

These differences in migration consequences suggest that migration outcomes depend upon who receives electricity and to what purpose that electricity is put. Unless there is significant job creation as a result of electrification, the electrification-education-migration linkage may predominate.

Development of a marketing system for supply of inputs and product sales

Market-places are another facility critical to rural development. In the eastern part of the United Republic of Cameroon, efforts to commercialize food crops are severely handicapped by the shortage of markets. In the ZAPI project region, only 16 per cent of the areas have any market and these areas are all near cities.[80] Similarly, in Bangladesh, the lack of a permanent market structure limits agricultural diversification and rural industrialization.[81] According to Johnson:

> "The greater majority of underdeveloped countries are agricultural economies that can only be transformed and modernized if farming can become increasingly commercialized. Every farm locality that hopes to develop will therefore need access to markets where farm produce can be sold for cash without the danger of monopsonistic exploitation and where there are enough sellers of farm supplies to prevent monopoly. Such markets and farm supply outlets should be punctiform, so that buyers will not have to go to one place for farm supplies, to another for credit, and to still a third place to sell their crops. What is essential, therefore, is a unified market town where appropriate facilities are congregated."[82]

Regulated markets with ample warehouse facilities have had a positive impact on the income and welfare of farmers using them. In India, areas with markets had higher incomes and more savings than those without. Consequently, a market development strategy has been adopted by the Government of India.

Lele's analysis shows that in Africa, the rural development strategies that have failed to meet marketing and storage needs have encountered more problems than those where market facilities were adequate. Inadequate market facilities result in variable prices, speculation and dominance by large land-owners. In addition, the development of storage areas is needed, as in Ethiopia, Malawi and Nigeria.[83] Other Governments seeking to improve farmer bargaining power by constructing warehouses and market outlets include Bolivia, Mexico, Nicaragua, Malaysia and Taiwan Province.[84]

Along with adequate market and storage structures, marketing services reduce the risks of adopting farm innovations. To use improved seeds or switch to vegetable crops, a farmer must be able to purchase fertilizer, insecticides and other farm inputs. He must know when, where and at what price to sell crops to maximize his return. These requirements imply that the farmer needs not only physical marketing facilities but marketing services, including a standardized system of weights and measures, a price information system, grading of produce and a decentralized network of fixed prices, government purchase and sales outlets. All or some of these market services have been adopted for portions of Bolivia, Colombia, Ecuador, Guyana, Mexico, Nicaragua, Paraguay, India, Israel, Malaysia, the Philippines, Thailand, Ethiopia, Kenya, Malawi, Nigeria and the United Republic of Cameroon.[85]

It has been said that adequate marketing services are the "cutting edge" of development.[86] Without inputs at reasonable prices, improved seeds and methods cannot be used. Without a supply of consumption goods, there is little incentive to innovate. Without markets in which to profitably sell the higher levels of output, adoption of innovations is almost an exercise in futility, as Colombian farmers growing cabbage found out when they could not sell their produce at sufficiently high prices to cover the input loans.[87] With appropriate marketing services, however, the risk of adoption of innovations is lessened and farmers can increase their incomes.

Although marketing services may indirectly reduce the income pressure to migrate, the impact on migration has not been explicitly evaluated. Virtually all farmers can benefit from a well-run marketing system that ensures a supply of inputs and purchase of produce. The problem is that in many cases the government marketing systems are inadequate. Smaller farm-

[78] Emerita C. Villanueva and others, "Nationwide survey on socio-economic impact of rural electrification", Philippines, National Electrification Administration, 1978.

[79] United States Agency for International Development, "An evaluative study of the Misamis Oriental Rural Electric Service Cooperative", Manila, Philippines, 1976.

[80] United Republic of Cameroon, ZAPI de l'est, op. cit.

[81] E. Chetwynd, Jr. and M. Farbman, op. cit., p. 20.

[82] E. A. J. Johnson, op. cit., p. 228.

[83] U. Lele, op. cit., pp. 84–91.

[84] See, respectively, Development Alternatives, Inc., op. cit; H. L. Cook and T. Cook, op cit., pp. 7–8; A.L. Brown and others, op. cit.; R. J. Pryor, op. cit., pp. 13–16; and E. Owens and R. Shaw, op. cit., pp. 89–99.

[85] For Bolivia, Colombia, Ecuador and Paraguay, see Development Alternatives, Inc., op. cit; J. J. F. Heins, "Spatial inequality in Guyana: a case study of Georgetown", *Tijdschrift voor Economische en Sociale Geografie*, vol. 69, Nos. 1–2 (1978), pp. 36–45; for Mexico, H. L. Cook and T. Cook, op. cit., pp. 7–8; for Nicaragua, A. L. Brown and others, op. cit.; for India and Israel, E. A. J. Johnson, op. cit., pp. 228 ff.; for other countries of Asia, R. J. Pryor, op. cit., pp. 12–16; and for countries of Africa, U. Lele, op. cit., pp. 81–99.

[86] E. A. J. Johnson, op. cit., p. 310.

[87] Development Alternatives, Inc., op. cit., p. H-11.

ers cannot afford transport costs to the government warehouse or their debts do not permit them to wait until the warehouse can process their harvest. In the Amazon region of Brazil, for example, inadequacies of the government marketing system forced many small farmers to sell out or abandon their claims, because they had to sell to private mills whose lower prices were below the level at which they could pay off government loans.[88]

As for other innovations that raise farm income, if adequate, marketing facilities may reduce the propensity to migrate among smaller farmers who no longer need to migrate to supplement their incomes. Unlike many other development inputs, marketing facilities can also affect the migration of the landless if the improved marketing permits farmers to expand areas under cultivation or change to more labour-intensive technologies.

In the long run, through the concentration of output and demand at one point, an adequate market structure is a seed-bed in which non-agricultural enterprises or agricultural processing industries can flourish. Thus, marketing facilities make possible the development of off-farm enterprises, which can reduce migration propensities for the landless, near landless and small and medium-sized farm households.

Training and education for rural development

Several studies have suggested that educational reform may slow rural out-migration if the resultant system is relevant to and supportive of rural lifestyles.[89] Included in such systems are curricula revision, adult literacy classes, agricultural and vocational training, removal of the élitist bias in the extension/training system and training for self-help efforts. Despite the lack of evaluation of subsequent migration changes, educational programmes specifically designed for rural areas continue to be central to strategies for slowing rural out-migration.

Curricula have been revised to orient youth towards rural job opportunities, at least in Benin, Kenya, Mali, Nigeria, Senegal, the United Republic of Cameroon, the Upper Volta, India, the Republic of Korea, Thailand, Peru and Nicaragua.[90] Changes have basically been effected at the primary level, where reforms have shifted the emphasis from the formal, academic aspects of schooling to rural development problems and programmes.

To date, the relatively few evaluations of the migration impact of the rural curricula reform fail to support unambiguously the claim that these reforms will persuade rural youths to stay in rural areas. In the Upper Volta, graduates of a rural agriculture school are staying in rural areas. They have co-operatively purchased oxen, which enables several to make use of the oxen for improved plowing.[91] Elsewhere, the evidence is more discouraging. One evaluation reports that young educated graduates of the small rural technical institutes in the Basse Casamance region of Senegal continue to leave. Education still commands respect and authority, which parents are proud to have children exercise in the town. Furthermore, the students themselves do not perceive their training as preparation for being modern farmers. They view it as a passport to take them away from the village and its perceived poverty.[92] In the western part of the United Republic of Cameroon, Gwan finds that the civil servants in rural areas do not send their children to the new type of educational programmes. In the eyes of other rural residents, this disdain only substantiates their perception of the low quality of the new type of education. Unless the new curricula are accepted from the top down, he suggests that the reforms will not be accepted and will have little impact.[93]

One final limitation on the migration effects of rural educational reforms is a demand for educated or semi-skilled manpower in rural areas. Researchers in Sierra Leone and Uganda found that many rural-urban migrants would be willing to remain in rural areas if there were jobs requiring their training and offering salaries comparable to the urban levels.[94] In Nigeria, only 20 per cent of the young school-leavers who completed metal and woodworking courses were able to remain in their home communities. The remainder were forced to peddle their skills elsewhere. Two factors have limited the ability of rural areas to absorb the graduates of the technical courses—capital and demand. Some who left for the city planned to return when they accumulated enough capital to set up shop. Ultimately, however, the low level of demand for the graduates' skills restricts the number that can establish themselves.[95]

The rural vocational institutes have other problems that further limit their potential for holding graduates

[88] Charles H. Wood and Marianne Schmink, "Blaming the victim: small farmer production in an Amazon colonization project", paper presented at the Interciencia Association Symposia Sorres, American Association for the Advancement of Science, Annual Meetings, Washington, D.C., 1978.

[89] Philip H. Coombs and Manzoor Ahmed, *Attacking Rural Poverty: How Non-Formal Education Can Help*, World Bank Series, (Baltimore, Maryland, Johns Hopkins University Press, 1974), pp. 10–26.

[90] For Kenya, see E. D. Harman and T. Zalla, op. cit.; for Senegal, Francis J. Lethem, "Innovation in education in West Africa", *Finance and Development*, vol. 11, No. 4 (December 1974), pp. 26–28; for other countries of Africa, P. Lobstein, loc. cit., pp. 180–182; for countries of Asia, P. H. Coombs and M. Ahmed, op. cit., pp. 141–147; Normal Gall, "Peru's education reform—Part I: More schools", *American Universities Fieldstaff Reports*, vol. 21, No. 3 (1974); and for Nicaragua, A. L. Brown and others, op. cit.

[91] F. J. Lethem, loc. cit., p. 26.

[92] Klaas de Jonghe and others, "Las migrations en Basse Casamance, Senegal", provisional report, Leyden, Netherlands, Centre for African Studies, 1976, pp. 16–18.

[93] Emmanuel Achu Gwan, "Types, processes, and policy implications of various migrations in western Cameroon", in Smithsonian Institution, *The Dynamics of Migration: Internal Migration and Migration and Fertility*, Interdisciplinary Communications Program Occasional Monograph Series, No. 5, vol. 1 (Washington, D.C., 1976), p. 35.

[94] D. Byerlee, J. L. Tommy and H. Fatoo, op. cit., p. 107; and Caroline Hutton, "Reluctant farmers?: a study of unemployment and planned rural development in Uganda", East African Studies, No. 33 (Nairobi, Kenya, East Africa Publishing House, 1973), p. 190.

[95] V. Austin, loc. cit., p. 65.

in rural areas. Harmon and Zalla state that a major problem with the village polytechnics in Kenya is the low level of competency of the graduates. The training strictly shelters the students from the "real world"; hence, they have no opportunity to improve through competition with others. They suggest integration of training with apprenticeships. In addition, the village polytechnics tend to provide training in handicrafts or skills for which demand is inherently limited. More graduates might find positions in rural areas if their training focused on goods or services with a more elastic demand.[96]

Another difficulty with most rural technical institutes or curricula reforms is their exclusion of women. A recent survey of women in the United Republic of Tanzania finds that they are interested in adopting innovations; and when they can learn these from their husbands, they will adopt them.[97] Given dramatic world-wide increases in female migration and household headship rates, training programmes need to address the need for employment and training that would enable both men and women to stay in rural areas.

To avoid intensifying the outflow of migrants seeking better educational opportunities, expanded secondary-school opportunities are also necessary in rural areas. Sierra Leone is attempting to provide more rural secondary schools.[98] Bolivia, Colombia, El Salvador, Mexico and Bangladesh[99] are using regional or mobile training centres to expand rural post-primary training opportunities.

Leaders in several countries have articulated their desire to train rural leaders for self-help or other development efforts. Without persons trained in and committed to organizing for development, little progress can be made towards the goal of self-sufficiency, and rural communities will continue to be dependent upon the outside (urban) world for assistance and support. Theoretically, if peasants feel they control their own destiny, with some guidance and assistance, development can be independent and self-motivating.

In several rural development programmes, rural leaders are trained first to identify community needs and then to organize in order to achieve those needs. In general, a sequence of surveys and discussions is used to enable local leaders to identify goals and priorities and to co-operate with regional or national planners in selecting programmes. Local leaders may also attend short courses on management, supervision and planning. Variants of this approach have been implemented in Bolivia, Colombia, Mexico, Nicaragua, Peru, Kenya, the Niger, Senegal, the United Republic of Tanzania, Bangladesh, Malaysia, Taiwan Province and Thailand.[100]

A case study from Colombia illustrates the migration relevance of community-wide participation in assessment of needs and planning. Previous development efforts in a small rural community had left the community well endowed with services, marketing facilities, extension support and schools. But these benefits were not equally distributed. The poor could not afford to send their children to school. Because the scholarship decisions were made by a committee with virtually no peasant input, the poor were powerless to change matters. Recently, however, the Government of Colombia adopted an "integrated rural development" programme whereby a local community organizer seeks out the peasants' participation in decisions. The poor now are participating in decisions; and for the first time, they have some interest in development and hope that perhaps its benefits will reach them instead of being channelled to the wealthier land-owners. The researchers suggest that this will lead to more of the poor staying in the community and attempting to get ahead without migrating.[101]

In summary, vocational education in rural areas and training for self-help are designed to increase the ability of the rural population to cope with its problems. With proper education and guidance, it is assumed that communities can identify and solve problems by mobilizing available resources. The confrontation and solution of problems, rather than their avoidance or surrender, is encouraged. Theoretically, this problem-solving ability results in lower outmigration because more persons are able to devise solutions or programmes to meet their needs. These effects are not expected immediately; generations of frustration, hopelessness and helplessness cannot be overcome by a few community self-help successes.

On the other hand, the migration effects of vocational training are immediately observable. As stated above, the probability of graduates' staying on depends upon the demand for their services and their access to capital. Thus far at least, both have been limited; hence fewer graduates stay than anticipated.

Expansion of off-farm employment opportunities in rural areas

The majority of migrants who leave their home villages are primarily motivated by a search for employment. Some seek only a temporary position that will enable them to supplement inadequate farm earnings;

[96] E. D. Harmon and T. Zalla, op. cit.

[97] L. Fortman, op. cit.

[98] D. Byerlee, J. L. Tommy and H. Fatoo, op. cit., p. 107.

[99] For Bolivia and Colombia, see Development Alternatives, Inc., op. cit.; and for Bangladesh, El Salvador and Mexico, C. P. Streeter, op. cit., pp. 7–39.

[100] For Nicaragua, see A. L. Brown and others, op. cit.; for other countries of Latin America, Development Alternatives, Inc., op. cit.; for Kenya, the Niger and the United Republic of Tanzania, U. Lele, op. cit., pp. 144–158; for Thailand, Robert E. Krug, Paul Schwarz and Sachitra Bhakdi, "Measuring village commitment for development", paper prepared for the Southeast Asia Development Advisory Group of the Asia Society, Seminar on Administrative Requirements for Labor-Intensive Development, Manila, University of the Philippines, July 1973, pp. 8–23; for Senegal and for other countries of Asia, E. M. Kulp, op. cit., pp. 103–186.

[101] Emil B. Haney and Maya G. Haney, "Social and ecological contradictions of community development and rural modernization in a Colombian peasant community", *Human Organization*, vol. 37, No. 3 (Fall 1978), pp. 225–234.

others have no hope of farm or off-farm work without moving and leave in search of a more permanent niche.

Because employment dominates the migration motivations, expansion of rural employment opportunities is expected to reduce rural out-migration. The opportunities for generating farm employment are limited, hence development planners have turned to labour-using public works and rural enterprises or industries as the vehicles for generating off-farm jobs.

High off-season unemployment makes construction of public works a particularly attractive solution to rural income and employment problems; an additional benefit is provision of much-needed infrastructure such as roads, tube-wells or schools. Self-help construction of minor public works is often the chief means by which local communities contribute to their own development. In addition to these local self-help efforts, some Governments have implemented major employment-generating "peoples' works" programmes. These labour-using programmes pay workers rather than counting the labour as a local matching contribution against central Government inputs. Examples of such projects are minor irrigation works, reforestation and the construction of housing and other buildings. Among the countries that have adopted employment-generating public works programmes are Bangladesh, Benin, Ghana, Kenya, Malaysia, Mali, Morocco, Peru, the Philippines, Senegal, Thailand and Uganda.[102]

An evaluation[103] of the Promotion nationale in Morocco finds that 60,000 man-years of employment have been created each year; and income has been redistributed to poorer families, while achieving an estimated rate of return on investment of 9 per cent. The study concludes that employment-generating public works are a cost-effective means of providing tangible outputs beyond simple job creation. Output equals that of alternative investments and the wages generated are recycled into the economy through the increased consumption by workers. Such projects may have continuing beneficial effects if the newly built facilities are maintained and adequately staffed. If every public works programme generates such benefits, a substantial reduction in the pressure to migrate may result, in particular among those who migrate only to supplement meagre rural earnings.

Despite these potential benefits of public works programmes, seasonal or temporary provision of jobs is not a long-run solution to the problems of growing rural unemployment or out-migration. It is merely a stop-gap measure until farm incomes can be raised and stable year-round sources of employment developed.

Decentralization of labour-using industries is one way of creating permanent jobs in rural areas. According to Weitz:

"Because of their size and character, industries that are not capital-intensive do not have to be located in big cities. On the contrary, a considerable proportion of them can be dispersed throughout the outlying areas and in the rural towns. In this way they can contribute to the development of interrelations between agriculture and industry. . . .

". . . It reduces population movement to the big cities, enabling those villages who have acquired a certain amount of training outside the field of agriculture to find employment in their home areas."[104]

If decentralization is to affect employment and migration, job creation should be a major factor in planning the decentralization. In one of the best examples of this emphasis, Puerto Rico carefully designed a programme—Operation Bootstrap—to match industrial location with resource and employment needs, taking full advantage of spatial complementarities. The programme is reported to have had substantial multiplier effects on rural development.[105] Governments have encouraged industrial decentralization through assistance in feasibility studies, construction of infrastructure and industrial estates, tax waivers, special training programmes for local entrepreneurs, low-interest loans for the establishment of small-scale firms, research supporting small-scale labour-intensive technology and assistance in developing domestic and export markets (especially the latter). A partial listing of countries that have used some or all of these programmes to promote decentralization of labour-using industry includes India, Israel, Malaysia, the Philippines, Taiwan Province, Thailand, Turkey, Mexico, Puerto Rico, Nigeria and Swaziland.[106]

Evaluation of the programmes in India, Mexico, Puerto Rico, Swaziland and Taiwan Province shows that the labour-using firms have generated jobs and raised incomes for workers, even though the number of jobs generated has not met expectations. One problem is that there are relatively few industries that take advantage of rural resources, employ a sizeable number of people and produce products that can be sold profitably after deducting transport costs. In Mexico, for example, suitable industries for rural areas are limited to handicrafts for export, resource processing and manufacture of transport-intensive rural consumption goods.[107] Industrial decentralization has worked best where it is planned for areas that have adequate physical and social infrastructure. When this has been done, the opportunity for occupational mobility without geographical mobility is greatest. It is

[102] See S. E. Findley, *Planning for Internal Migration*, pp. 85–86.

[103] Dudley Jackson and H. A. Turner, "How to provide more employment in a labor surplus economy", *International Labour Review*, vol. 107, No. 4 (April 1973), p. 318.

[104] Raanan Weitz, *From Peasant to Farmer: A Revolutionary Strategy for Development*, Twentieth Century Fund Study (New York, Columbia University Press, 1971), p. 131.

[105] E. A. J. Johnson, op. cit., pp. 255–256.

[106] For India, see E. A. J. Johnson, op. cit., p. 339; for the Philippines, Puerto Rico and Taiwan Province, *idem*, pp. 152–176; for Malaysia and Thailand, R. J. Pryor, op. cit.; I. Haissman, "Rural industrialization in Mexico", paper prepared for a United Nations Expert Group on Rural Industry, 1973, pp. 4–10; for Israel, Nigeria and Turkey, R. Weitz, op. cit., pp. 132–138; and Juha Vakkuri, "Made in Swaziland", Action, United Nations Development Programme, 1975, p. 11.

[107] I. Haissman, op. cit., p. 80.

claimed that in Israel industrial decentralization has slowed the population drift to towns.[108]

More important to job creation than the co-ordination of industrial decentralization decisions with the availability of infrastructure and appropriate inputs, however, may be the actual political commitment to industrial decentralization. Some countries have explicit industrial decentralization policies; yet, when the actual investments in industrial infrastructure are compared with those planned, the bulk of infrastructure investments still are made by both private and public sectors in the major metropolitan regions, as, for example, in Brazil, Colombia, the Philippines and Sierra Leone.[109] It is clear that there is much more to implementing an industrial decentralization policy than simply enunciating the policy. The inertia of investing in the largest and most industrialized city is not easily overcome, especially if there are substantial political and economic lobbies to maintain that pattern.

Creation of rural market towns

A number of the co-ordination and complementarity dilemmas plaguing efforts to build adequate marketing systems, co-ordinate the provision of physical and social infrastructure and generate off-farm employment opportunities can be resolved by siting these activities in rural market towns. Rural market towns are the intermediate links between rural-based agriculture and urban-based secondary and tertiary activities. In essence, the rural market town is the locus for integrating urban functions into rural development.

Development of a network of market towns serves to co-ordinate the multisectoral development inputs spatially. Because many of these programmes are interdependent, spatial co-ordination is vital to overall success of a scheme. In general, market-town strategies are expected to function in the following ways to solve problems or inconsistencies of rural development efforts:

(*a*) Provide more specialized services and commercial goods to more isolated villages, which individually have too small a demand to support the services;

(*b*) Act as a marketing depot for the surrounding agricultural region;

(*c*) Provide basic urban infrastructure and services (water, electricity, bank, market and labour market) necessary for small-scale industries and enterprises;

(*d*) Act as a node in the transportation system linking rural areas to other cities and regions;

(*e*) Provide a lower end to a decentralized administrative and political hierarchy, channelling local concerns "bottom-up" and articulating objectives of the central Government "top-down";

(*f*) Act as a node for spatial co-ordination of development inputs, so that interdependent inputs are made available either together or in the proper sequence, as needed;

(*g*) Provide an urban place in the vicinity to which rural residents may commute in order to find off-farm jobs or to market home-produced consumer goods;

(*h*) Provide a small urban alternative for potential migrants from the surrounding area.

Generating all these functions is costly, both financially and politically. In order to concentrate inputs at a sufficient level to guarantee adequate functioning, careful selection of appropriate towns is necessary. Not all villages can become market towns. This means that some towns (usually the district or micro-region administrative centres) are selected to receive a full panoply of development inputs, while others are not. Obviously, such a strategy is not without its political risks. Furthermore, the town cannot develop properly unless it is linked to larger cities, which means nurturing linkages both down to rural villages and up to the larger cities. A market town that is isolated from larger city markets is not going to flourish.

Despite these potential pitfalls, creation of a network of rural market towns is increasingly viewed as a necessary component of rural development efforts. To date, market-town strategies have been incorporated into rural development programmes in Bolivia, Costa Rica, Guatemala, Kenya, Nicaragua, the Niger, Paraguay, Peru, the Philippines and the Upper Volta,[110] as well as in India, Israel, Malaysia, Mexico, Suriname, the Syrian Arab Republic, Taiwan Province, Turkey, the United Republic of Cameroon and the United Republic of Tanzania.[111]

To minimize the risks of choosing less than optimal towns as centres, a number of countries have undertaken careful studies of rural development potentials vis-à-vis the existing urban network. In Bangladesh, Nicaragua, the Philippines, Thailand and the Upper Volta, such studies have enabled planners to designate the regions where development of market towns would dovetail with ongoing urban and rural development efforts.[112] Although these studies may appear costly and time-consuming, they result in a better understanding of how the market town will function, as well as providing a consistent set of selection criteria that

[108] R. Weitz, op. cit., pp. 150–151.

[109] See, respectively, John J. Harrigan, "Political economy and the management of urban development in Brazil", in Wayne A. Cornelius and Felicity M. Trueblood, eds., *Urbanization and Inequality: The Political Economy of Urban and Rural Development in Latin America*, Latin American Urban Research Series, vol. 5 (Beverly Hills, California, Sage Publications, 1975), pp. 211–212; Alan Gilbert, "Urban and regional development programs in Colombia since 1951", in W. A. Cornelius and F. M. Trueblood, eds., op. cit., pp. 258–264; Ernesto N. Pernia, "Urbanization in the Philippines: implications for population distribution policy", in Smithsonian Institution, *The Dynamics of Migration: Internal Migration and Migration and Fertility*, Interdisciplinary Communications Program Occasional Monograph Series, No. 5, vol. 1 (Washington, D.C., 1976), p. 123; and D. Byerlee, J. L. Tommy and H. Fatoo, op. cit., p. 104.

[110] E. Chetwynd, Jr. and M. Farbman, op. cit.

[111] S. E. Findley, *Planning for Internal Migration*, pp. 91–95.

[112] E. Chetwynd, Jr. and M. Farbman, op. cit., pp. 1–12.

are less vulnerable to the criticism of political favouritism.

Allocation of new services after the centre has been designated is critical to the successful functioning of the market town. Ideally, all government programmes would co-ordinate their service outposts and programmes with the centre strategy; but in the real world this seldom happens without definite mechanisms established for the purpose. Ironically, without this co-ordination the entire concept of a service centre is undermined by the dispersion of programme agents and programmes in different villages. Likewise, the co-operation of individual entrepreneurs is important to the development of a network of centres. When centres are not significantly differentiated from non-centres, there may be little reason to conform and the resulting spread of enterprise makes establishment of distinctive centres all the more difficult. In such cases, "top-down" co-ordination and stipulation of development incentives and restrictions can help to reinforce the development of the "nascent" centres.[113]

A continuing problem in creating market towns is the conflict between the demand for maximum dispersion of development inputs and the need for adequate concentration of services and infrastructure. Because the development of market towns requires a large commitment of administrative and financial resources, few countries have been able to implement these programmes on a nation-wide basis. As a result, income and opportunity differentials between participating and neglected areas may widen, leading to jealousy and pressure to equalize investments, as in the United Republic of Cameroon and in Mexico.[114]

Co-ordinated provision of inputs is essential to the development of service centres or market towns. Establishment of a single agency capable of co-ordinating all programmes relating to rural and market-town development facilitates the appropriate timing and allocation of investments. In Mexico, the multisectoral, integrated rural development programme has been implemented in 20 micro regions and all project activities are administered through one agency.[115]

Spatial and temporal co-ordination is furthered by the utilization of clearly defined investment and programme criteria.[116] When both co-operating agencies and participating communities know their responsibilities and rights, there is less confusion about who gets what and when. For example, in the PIDER programme in Mexico, the Government has made use of three-party joint planning. The local, regional and federal representatives jointly draw up a plan, which is then drafted in contract form so that each party knows exactly what to expect. This system represents a case in which general criteria evolve into very specific commitments. Another approach is central definition of specific eligibility, cost and timing criteria for individual projects, as in Bangladesh and Malaysia. Co-ordination of inputs according to previously defined and known criteria also lessens the likelihood that resources will be meted out solely as favours and also makes the differential allocation of investments more understandable to communities.[117]

But co-ordination of inputs and market-town development must also be attuned to local needs; after all, the market town is really there to serve the rural population. Each participating village must feel that the results of co-operation with the market town are greater than if it tried to operate in isolation.[118] Existence of local participation, however, does not guarantee that the local voice will be followed. Without concomitant delegation of authority to make decisions and control programme funds, participation tends to be superficial.

Efforts to encourage local participation notwithstanding, local involvement generally in centre development has been limited. In SRDP in Kenya and CADU in Ethiopia, there has been little real local involvement in decision-making, despite the existence of participatory channels.[119] And in Mexico, despite the well-planned participation structure of PIDER, a recent evaluation finds that only 20 per cent of the participating villages had even been asked about their needs.[120] In Bangladesh, Malaysia, the Niger and Senegal, however, there appears to be a balance between regional and federal co-ordination and local initiative and responsibility.[121] The approaches differ, but each balances regional versus local authority, supervision versus training and flexible versus fixed criteria. The key to participation seems to be effective two-way communication.

Summary of migration impacts of market-town developments

Most of the market-centre strategies discussed above have only recently been implemented; and evaluation of their impacts on employment, income and migration would be premature. Where centre structures have been in existence for some time, evaluations of income and employment changes tend to be very positive. A comparative analysis of many countries finds a rough inverse relation between the number of villages served by each market town and national per capita income.[122] Substantial income and employment gains have accrued to areas surrounding market towns in India, Israel, Mexico, Puerto Rico, Taiwan Province and Yugoslavia.[123] Where establish-

[113] E. M. Kulp, op. cit., pp. 92–95 and 480–486.

[114] See, respectively, U. Lele, op. cit., pp. 105–106; and M. M. Cernea, op. cit., pp. 58–66.

[115] M. M. Cernea, op. cit.

[116] Robert Chambers, *Managing Rural Development: Ideas and Experience from East Africa* (Uppsala, Sweden, Scandanavia Institute of African Studies, 1974), pp. 105–108.

[117] E. M. Kulp, op. cit., pp. 123–168 and 201–247.

[118] S. E. Findley, *Planning for Internal Migration*, p. 94.

[119] U. Lele, op. cit., pp. 130–142.

[120] M. M. Cernea, op. cit., p. 69.

[121] E. M. Kulp, op. cit., pp. 93–197.

[122] E. A. J. Johnson, op. cit., pp. 176 and 296.

[123] Ibid., p. 296; and M. M. Cernea, op. cit., p. 55.

ment of trade centres or market towns has been combined with the development of co-operatives, as in the WADU programme of Ethiopia, there is evidence of improved employment and income.[124] The gains, particularly for non-agricultural employment, may not accrue as quickly or in the volume intended, but they do exist.

Two problems limit expansion of market-town networks. First, due to high administrative costs, this strategy can usually be implemented only in a few areas; and the resulting disparity between lagging and growing areas dampens enthusiasm. Secondly, there is a tendency to emphasize the public works aspect of the programme. This emphasis may delay or reduce its generation of permanent employment and shift attention away from underlying social problems. After construction of roads, markets, schools and clinics, the communities may still lack the resources to operate these facilities, the price supports necessary to benefit from the markets or the training needed for small-scale industry. A viable rural market town is much more than the physical infrastructure.

These problems notwithstanding, market towns still are considered to be one of the most critical components of integrated rural development programmes. Without the geographical focus for project resources and consumer demand and without the integration into the national economic system made possible by market towns, efforts to create permanent off-farm employment opportunities are doomed. Consequently, without viable off-farm employment opportunities, migration to other regions and cities will persist. Likewise, market towns facilitate other efforts to raise agricultural productivity; and unless agricultural wages and incomes rise, current rates of migration will only accelerate.

Summary of migration consequences of integrated rural development strategies

Most integrated rural development projects have not been in existence long enough for the full socio-economic or migration consequences to be assessed. The major changes envisioned by the rural development planners will take years to manifest themselves.

The few preliminary evaluations that exist, however, may indicate whether the programmes are on target with their objective of reducing rural-urban migration. Divergence from the expected outcomes are instructive, in that they suggest a misfit between the problem, the diagnosis and the treatment.

Before discussing the evaluations of overall projects, a word about the project sample is in order. To be included in the discussion, a project had to meet the following criteria:

(*a*) It could be defined as an integrated rural development scheme;

(*b*) An evaluation of the employment, income and/or migration changes resulting from the project had to have been completed and released;

(*c*) The evaluation should have been completed well into or after the project implementation phase;

(*d*) The evaluation had to be available to the public. Although an attempt has been made to include a representative sample from different types of development situations, the assembled project evaluations are not a random sample. It is diverse enough to be illustrative, but not conclusive.

Ideally, a complete evaluation of the migration response to an integrated rural development project would include evaluations of the relative migration impacts of individual project components, as well as an evaluation of the impact of the overall scheme. Project evaluations would be grouped by type of project mix and by project environment or context. The project mix would depend upon the mix of the eight basic components of integrated rural development, as described above. Project environment or context could be defined in national or regional terms. Possible variables might include level of economic development, degree of dependence, degree of inequality in the distribution of rural incomes and wealth, governmental "development style", type of agriculture, market linkages and socio-economic characteristics of the population.

The limited number of evaluations considered here does not permit such a systematic treatment of the migration responses categorized by development project mix and project context. Rather, these evaluations are fairly general and are intended only to highlight some of the apparent contrasts between planned and actual migration outcomes. The projects are summarized below.

D. Evaluations of integrated rural development projects

Bicol River Basin Development Programme in the Philippines

An evaluation of the Bicol project in the Philippines[125] concludes that the planned increases in output are unlikely. The region has a serious deficiency of market towns and access roads; and without these facilities, farmers cannot profit from the development inputs. Migration is not explicitly evaluated; but if the income growth fails to materialize, there is little reason to anticipate a migration change. If anything, out-migration may increase with better roads, infrastructure and education, as has happened in areas with electrification.

[124] T. Tecle, op. cit., pp. 27–29.

[125] Dennis A. Rondinelli, "Bicol River Basin urban functions in rural development project: summary and evaluation", prepared for the Office of Urban Development of the United States Agency for International Development, Washington, D.C., 1978, pp. 26–30.

ZAPI de l'est in the United Republic of Cameroon

Until recently, the ZAPI de l'est project has focused on coffee and cocoa development. Its inclusion of training, women's credit groups, health and food crops components puts this project into the integrated rural development category. The project has increased incomes substantially, but transport and limited coffee-processing facilities limit major expansion. None the less, it seems that the project has prevented a rise in out-migration, as migration rates for both men and women remain low.[126]

International Labour Organisation pilot project, 1969-1974, in Nigeria

The International Labour Organisation project in Nigeria had three components: agriculture; infrastructure; and industrial development. Only the effect of the industrial development on migration is evaluated. The vocational training is shown to have long-term benefits for the young, who learn eagerly and apply what they have learned in subsequent jobs. Only 20 per cent of the young graduates were able to stay in the area due to lack of capital and limited consumer demand.[127] More of the graduates would have stayed if their training had better matched rural demand constraints or if the project had made capital available. On the positive side, the training is of long-term benefit to the graduates, in that they will earn more and some will be able to come back when they have accumulated enough savings.

INVIERNO project in Nicaragua

The main thrust of the INVIERNO project in Nicaragua is credit with extension; but other project components include training for self-help, rural access roads, community development and marketing. The project has increased participating farmers' incomes. The project was well planned and the marketing facilities developed by the project were able to handle the increased output. Also, training for self-help (Motivation-Organization-Capacitation) has resulted in establishment of 92 groups which have undertaken an average of four projects each in one year.[128] Migration was not explicitly evaluated, but it is likely that the income benefits among small farmers may reduce rural-urban migration, at least in the short term.

Vihiga special rural development project in Kenya

The Vihiga special rural development project (1970-1976) in Kenya had several components, but co-ordination was limited. Despite its objective of ameliorating the poverty of the area and reducing male out-migration, in 1974 the project was not on target to meet its goals. Because credits went predominantly to those who did not need assistance and because the livestock innovations were inappropriate for the poorer farmers, the income gains were disproportionately concentrated among the better-off farmers, where a migration impact is less likely. Also, the village polytechnics did not reduce youth out-migration due to inadequate training, capital and demand. The planned migration and employment changes are not materializing.[129]

PIDER in Mexico

The PIDER project in Mexico is without doubt the largest financial commitment to integrated rural development. Despite the explicit intention to reach the poorest, 40 per cent of the target group are not receiving benefits. The farmers with irrigated lands are receiving substantially more benefit than the others. Likewise, livestock investments favoured the larger *ejidatorios* who can afford to plant large pastures. Income disparities have widened between beneficiaries and non-beneficiaries and between irrigated and non-irrigated areas. There is also limited village participation in planning and decision-making. Cernea suggests that more attention should be paid to village-level differences and needs. Despite these problems, the project has increased employment. Many of the new jobs were temporary, however; and for the permanent jobs, salaries have not risen along with productivity increases.[130] Migration is not explicitly evaluated, but it is likely that there has been wage-labour migration into the project areas to meet the temporary and seasonal demands. If the beneficiaries now are more likely to send their children away for school and urban careers, rural-urban migration will increase. Because the rain-fed programmes have prevented income losses, the project may have slightly reduced rural-rural seasonal or temporary migration among the smaller *ejidatorios*.

Banana plantation in the Casamance region of Senegal

The banana plantation project in the Casamance region of Senegal has resulted in increased differences between the rich (banana farmers) and the poor (peanut farmers and landless). Migration consequences are evaluated. There is no diminution of out-migration among households cultivating bananas. In the long term, migration to cities is expected to increase because more households send members to cities for schooling and work.[131]

The insights provided by these evaluations are:

(a) *Integrated rural development does not reach people equally; neither are its migration consequences uniform*. The more selective are least affected, in that they will continue to send children to town for school

[126] United Republic of Cameroon, ZAPI de l'est, op. cit.
[127] V. Austin, loc. cit., pp. 61–68.
[128] A. L. Brown and others, op. cit.
[129] E. D. Harmon, Jr. and T. Zalla, op. cit.
[130] M. M. Cernea, op. cit.
[131] K. de Jonghe, loc. cit.

and work. Others may be less likely to move to other rural areas, while still others may be less likely to go to cities. The migration outcomes depend upon the distribution and permanence of job and income changes, both within and between communities;

(b) *Migration is a way of life for many rural residents*. If rural development results in improved incomes, the family is not necessarily less likely to migrate. Instead, the timing, permanence or destination of migration will change. The most likely change is a shift to more permanent rural-urban migration, particularly for the less impoverished. Areas that have higher incomes, more urbanization and more roads have higher out-migration rates than more impoverished zones; and in the better-off areas, migration is more likely to be directed towards cities;

(c) *Vocational training with the potential for employment in market towns in the vicinity offers an alternative to the young school-leaver who would otherwise go to a distant city*. Commutation or short-distance migration to the market town may be preferred in these cases, assuming capital and demand are not constraining. Rural consumer demand appears to be the most significant constraint on small-scale market-town enterprises. Efforts to diversify production and increase producer incomes will facilitate off-farm employment in trades, services, agro-processing and other rural industries;

(d) *Improved techniques that increase labour demand may or may not be adopted, depending upon whose labour is required and when*. If the innovations are adopted by small farmers, this may result in less rural out-migration by some family members. Also, the smaller land-owners would sell less family labour to other larger land-owners. Thus, a secondary effect is a slight increase in labour demand among the medium to large land-owners, which would reduce temporary rural-rural or rural-urban migration among the less selective, landless residents;

(e) *Roads and market facilities continue to be serious limiting factors in integrated rural development schemes*. Without this basic infrastructure, participation among the more impoverished is less likely, hence migration consequences are limited;

(f) *Pricing policies mediate the effects of the integrated rural development schemes*. If productivity and average prices rise, then the urban-rural income difference may not continue widening. Otherwise, continued income differences dampen the potential rural-urban migration reductions, particularly among the more selective migrants who are sensitive to urban wages;

(g) *In general, migration follows transportation and trade patterns*. Creation of a more well-defined set of interactions between village, market town and regional cities may therefore increase migration to cities not previously experiencing high rates of in-migration. This can be expected as part of the long-term changes in migration destinations that accompany integration of previously isolated or impoverished zones into the national system.

It appears that keeping rural population on the farm is an inappropriate goal for integrated rural development schemes. A more accurate reflection of the dynamics of rural development and migration would be "increasing migration options". Integrated rural development schemes have resulted in less rural-rural migration, more commutation and rural-small city migration, and varying changes in rural-metropolitan migration. Compared with either the current migration funnelling into metropolitan areas or the "farm-only" option, these anticipated migration changes may be more compatible with individual migrant goals and long-term development goals of national integration and equity.

Conclusion

In almost all the cases discussed above, the migration consequences differed from the planned responses. When none was planned, migration changes were unexpected. Table 14 summarizes the types of migration changes observed or expected for each programme type covered above.

Except for the shifts in labour demand that followed the adoption of labour-using, irrigated crop varieties, virtually all the capital-intensive agricultural development programmes either did not slow or actually accelerated rural-rural or rural-urban migration levels. Due to widening income disparities, the rural residents hardest hit by these programmes were the smaller farmers and the landless.

Partially in a reaction to these often unwittingly pro-migration policies, many Governments have adopted a new type of rural development programme. Integrated rural development programmes come with varying emphases and styles; yet, most have a secondary goal of reducing the rural-urban drift. Although this evaluation is only preliminary, the present findings suggest that the new programmes do not uniformly reduce rural-urban migration. For the more selective migrants, the sons and daughters of the middle class or the élite, only the rural vocational training institutes reduce the probability of moving to cities; and these effects are limited by low consumer demand. If the programmes expand or stabilize year-round labour demand, there will be less rural-rural migration among the poorest; however, not all programmes affect the poor and improved rural access roads can increase rural-urban migration among the poorest. The most consistent short-term reductions in rural-urban migration are exhibited among the moderate-to-less selective small farmers. But even for this group, increased prosperity and urban awareness may result in higher rural-urban migration rates among subsequent generations.

The prognosis for short- and long-term reductions in rural out-migration pressures is more favourable with some programmes—market towns, off-farm employ-

TABLE 14. SUMMARY OF MIGRATION OUTCOMES OF RURAL DEVELOPMENT

Project type	*Type of migration*		
	Very selective permanent rural-urban	*Less selective semi-permanent or permanent rural-urban*	*Less selective seasonal rural-rural*
Capital-intensive agricultural development			
1. Unsupported land reform	0	− Short-term + Long-term	+
2. Restrictive bank loans	0	+	+
3. Conversion to water-sensitive high-yield varieties	0	+ Long-term	− If no mechanization
4. Subsidized agricultural mechanization	0	+	++
5. Low commodities prices	+	++	+
6. Underdevelopment of rural infrastructure	+ Long-term	+	0 Short-term + Long-term
7. Formal educational curricula	++	++	0
Integrated Rural Development			
1. Supported land reform	+	−	0 If do not get land − Otherwise
2. Supervised credit for small farmers	0	− Short-term 0/+ Long-term if educating children for urban jobs	0
3. Labour-intensive agricultural innovations	0	− Depends upon specific innovations	−
4. Expansion of rural access roads	0	− Short-term 0/+ Long-term if including urban awareness	− Less rural-rural + More rural-urban
5. Development of a marketing network	0	− Short-term 0/+ Long-term if educating children for urban jobs	− If increased labor demand
6. Rural-oriented curricula	− Limited to middle class	−	0
7. Creation of off-farm employment	− Limited to middle class	−− If jobs in the vicinity	−− If jobs in the vicinity
8. Development of rural market towns	− If commutation + If to other linked cities	−− + Slight long-term increase, especially to cities in the vicinity	− If jobs in the vicinity or agricultural employment increases

NOTES: 0: Neutral or indeterminate effect.
+: Increases migration of that type.
−: Decreases migration of that type.
Double sign indicates strong effect.

ment—than with others. This prognosis does not mean, however, that other programme components can be ignored. Certain components—roads, infrastructure, markets and supervised credit—are essential to the long-term success of the entire rural development strategy.

More to the point, this discussion of integrated rural development programmes underscores their role in altering migration patterns. To a certain extent, the programmes can reduce and have reduced permanent rural out-migration. A more significant though little publicized effect of integrated rural development programmes, however, is the opening-up of other migration and commutation alternatives: to other rural areas; to towns in the vicinity; and to other cities economically linked to the rural market towns. In the long term, there may be no less rural-urban migration, but the mix of destinations may change. The real challenge for development planners is to stimulate and utilize this migrant variability.

Part Six

INSTITUTIONAL REQUIREMENTS AND DATA NEEDS

XII. POPULATION REDISTRIBUTION: POLICY FORMULATION AND IMPLEMENTATION

*Robin J. Pryor**

A recent comparative analysis of net rural-urban migration rates and development indicators for 29 less developed countries concludes that "far from being ill-behaved and out of control", rural-urban migration in those countries is "closely associated with economic structural factors"; although reasons may exist for viewing with alarm the high rates of such migration, the "highly integrated role of locational changes in current modernization processes" should be recognized in anti-migration policies.[1]

While the use of solely economic indices needs to be queried, the point is that population distribution and redistribution are the territorial reflection of complex local variations in a highly interdependent regional social system. To intervene in such a system requires not only considerable data collection and analysis, policy formulation and programme implementation but the identification of viable alternative strategies to achieve politically recognized goals, values and priorities, a consensus which results in the political will to act and the adoption of politically feasible avenues of interference with the *status quo*. In reality, short-falls in knowledge, will and ways mean that population movements generally result only from indirect measures focused on other problems or minor tinkering with the socio-economic locational framework. Development planning as a whole (as well as minor elements influencing population redistribution) operates amid many constraints and can at best only nudge—and certainly not catapult—the powerful and pervasive forces already at work within a country and in the wider international economic order. Hence, the difficulty of intervening in "natural" migrational processes arises and it becomes vitally important that any intervention be well-informed, carefully considered and explicitly integrated with other development policies.

A. Policy formulation

To move from an acknowledgement of the complex, interdependent, culture-specific and time-specific context of policy intervention to an analysis of policy formulation is to make major assumptions about the desirability and feasibility of intervention. Some of the main assumptions are as follows:

(*a*) The process of urbanization is a necessary though not sufficient condition for modernization and economic development; this process is susceptible to policy intervention and reorientation, if not to total control due to the spectrum of endogenous and exogenous forces;

(*b*) The various regional and sectoral development strategies of a country (or region) can and should be planned jointly;

(*c*) Programmes and projects, of both direct and indirect types, can be introduced to redistribute effectively and efficiently a "small" but "significant" proportion of the population of a country;

(*d*) The rural/urban (and other functional regional) balance of the territorial implications of a policy should reflect the nature and distribution of land and other resources, rather than pursuing regional equity *per se*;

(*e*) The sectoral investment trade-offs between agriculture, manufacturing and social planning needs have changing rural/urban (and other subregional) orientations over time;

(*f*) Diverse rural infrastructure investments are necessary to control rural population growth, to service such areas adequately and to enhance their "holding power" in relation to urban and growth-pole areas;

(*g*) The political base may need to be strengthened and broadened to facilitate the socially effective and economically efficient introduction of redistribution policies;

(*h*) Rates of metropolitan growth and gross rural-urban mobility (both temporary and permanent) justify the use of direct redistribution policies as important elements of "policy packages" concerned with regional economic and demographic change.

More specifically, certain principles emerge from recent analyses[2] of migration and development:

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[1] Samuel H. Preston, "International comparison of net rural-urban migration rates", International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980's* (Liège, 1979), p. 290.

[2] *Report of Habitat: United Nations Conference on Human Settlements, Vancouver, 31 May–11 June 1976* (United Nations publication, Sales No. E.76.IV.7), "Recommendations for national action", item 10 of provisional agenda: and Robin J. Pryor, ed., *Migration and Development in South-East Asia: A Demographic Perspective* (Kuala Lumpur, Oxford University Press, 1979).

(*a*) There is a strong case for the development of a comprehensive population distribution or settlement policy at the national level. At first, this development requires the definition of quality-of-life goals and minimum standards of access to essential goods, facilities and services; the management of the growth and distribution of the population on a nation-wide bais; and the specification of the desired balance between, and goals for, metropolitan regions, provincial centres, new towns and growth centres, rural and urban lagging regions and resource areas of all kinds;

(*b*) The comprehensive distribution (or settlement) policy must be closely integrated with all major economic and social development goals and have a labour-intensive orientation geared to mass consumption industrial expansion;

(*c*) It is necessary to specify the distributional goals and to quantify the desired/expected locational consequences of sectoral as well as of regional development strategies;

(*d*) All subnational urban and regional plans need to be co-ordinated and integrated as to goals, demographic and economic projections, proposed sources of population and investment, and links between tiers of government and between government, private business and international firms and agencies.

(*e*) Policy-makers need to have a heightened awareness of the complex nature of the migration and population assimilation processes, in order to optimize the planning of migrant recruitment, the triggering of spontaneous movements and the success rate in retaining settlers (and their children) in their planned new environments. There appears to be little appreciation of the importance to migrants of continuing rural/urban links, the cyclical and self-perpetuating nature of chain migration, the economic and demographic implications of large-scale (yet often disguised) temporary circulation between towns and villages, the operation of cultural norms and social control subsystems in communities of origin and destination; and the fact that the motivation and mobility behaviour of the individual migrant cannot be understood, let alone modified, in isolation from the extended family and wider village community of which he or she is a member;

(*f*) If policies and programmes are to be flexibly related to actual population movements and relevant changes in the structure of a society and its constituent communities, there is a need continuously to monitor demographic trends. Decennial or quinquennial censuses provide baseline data, but registration systems and detailed surveys are necessary, as is detailed below in the model of policy formulation.

Obviously, many problems surround the planning, organization and allocation of resources related to population redistribution policy. A recent report[3] summarizes some of the reasons that plans frequently fail to work out or do so in ways different from those intended:

(*a*) Numerous variables are usually involved, with complex reciprocal relationships and feedback effects, which are often unanticipated;

(*b*) Goals have not been thought out precisely and implemented effectively or goals have been sought that cannot be attained by the programme put into operation;

(*c*) Many conflicting government policies exist simultaneously and may affect a process like migration in different ways, even though they were drafted with no thought of doing so;

(*d*) Policies and programmes have been imported, rather than devised to meet local conditions or modified to assure a fit with the requirements imposed by the new setting;

(*e*) Adequately trained personnel and requisite technical skills are lacking, at least in sufficient quantity;

(*f*) Financial resources are insufficient to carry out a programme nationally and further inequalities are created if the programme is carried out in only a few localities;

(*g*) Highly centralized planning is imposed on a target segment of the population without either sufficient knowledge of its wants and needs or any meaningful input by those affected;

(*h*) Support of government leaders is confined to "lip service" rather than given strong public and private backing to assure sufficient momentum;

(*i*) The programme is not adequately monitored and consequently comes apart as a result of lack of adjustment to changing conditions or neglect from simple bureaucratic entanglement.

It is possible to distinguish between indirect and direct causes of dissonance between existing and desired population distributions. The more indirect causes relate, for example, to national transport policies, the distribution and relative decentralization of regulatory power and regional jurisdictions. One source[4] suggests seven main direct causes:

(1) High sensitivity thresholds may exist so that marginal changes are not consistently acted upon;

(2) Public policy decisions may be irreversible or reversible only with long time-lags;

(3) A city may lack regulatory power or the will to exercise it;

(4) Opportunity for generating and capturing urban rents may stimulate speculators, due in particular to superior information;

[3] Vincent Whitney, "Planning for migration and urbanization", paper prepared for the Seminar on New Conceptual Approaches to Migration in the Context of Urbanization, organized by the Committee on Urbanization and Population Redistribution of the International Union for the Scientific Study of Population, Bellagio, Italy, 30 June–4 July 1978 (mimeographed).

[4] R. W. Crowley, "Population distribution: perspectives and policies", in Alan A. Brown and Egon Neuberger, eds., *Internal Migration: A Comparative Perspective* (New York, Academic Press, 1977), p. 258.

(5) Externalities may exacerbate growth trends because decision-makers do not bear all the costs of their decisions;

(6) There may be a lack of information on alternatives or alternatives may be incorrectly evaluated, or both of these may occur;

(7) Technological change may affect either actual or optimal size.[5]

Another way of exposing the problems of policy formulation is to identify certain mistaken, misleading or at least debatable assumptions which can underlie planning, including assumptions that:

(*a*) The values of a country are automatically explicit and unambiguous in the goal-formulating and decision-making processes and in public documents purporting to promulgate, explain or justify those goals and decisions. It can be argued that value premises should be made explicit so that research can aspire to be objective, honest, clear and conclusive. The same applies to policy formulation—underlying values need to be recognized for what they are, consciously, specifically and explicitly. Where values are implicit—or worse, unexamined or conflicting—policies and projects cannot be effective or efficient;

(*b*) Population distributional goals can be attained, for example, simply by the provision of land or jobs, without due attention to necessary changes in social structure and institutions which can stimulate relocation and aid the integration and acceptance of migrants at their destinations;

(*c*) Policy attention can be confined to "problem zones", such as areas of high rural unemployment or urban squatter communities. Rather, the concern is the entire settlement system and its man/land/capital resource mix which can be modified by encouraging relocation to small towns and viable existing rural areas as well as to more obvious growth centres or new settlement schemes;

(*d*) Migrants attracted by direct redistribution policies are essentially young, adult male workers with a commitment to the new location. Instead, it must be recognized that migrant sex ratios change over time, family migration with dependents often has strong cultural supports, long-term and routine patterns of circulation prevail in many established rural families, remittances may facilitate urban visits which in turn accelerate urban in-migration, and relatives and friends at the origin and destination have a key role in the motivation of migration and the stability of residence at both poles of the process;

(*e*) Locational incentive policies, such as tax benefits or wage loadings, expanded employment opportunities and planned communities or housing complexes, effectively attract potential migrants. On the contrary, middle-class families infiltrate housing built for squatters or factory workers, and even government employees are reluctant to move because salary incentives or other lures do not counteract much more complex locational preferences and established social networks;

(*f*) Information about target areas, such as low-cost housing, industrial estates or land settlement schemes, is positive and efficiently conveyed by the mass media and government agencies. Rather, research stresses the crucial role of interpersonal links between families and individuals in the migration process, and the high selectivity and distortion of public information communicated about places and projects;

(*g*) Infrastructure, such as roads, schools and health clinics, "develop" and "modernize" a community and therefore hold population in a potential out-migration area. Paradoxically, the evidence is that such provisions often accelerate dissatisfaction, heighten aspirations and accentuate out-migration by supplying the necessary transport to the city;[6]

(*h*) Redistribution policies and programmes are able to achieve large-scale redistributions, and within the short-term perspectives of one or two five-year plans. The experience of Indonesia, Malaysia and other countries is that much capital, diverse infrastructure, a time perspective of 15–20 years and a regional development (rather than population-shifting) focus are necessary to redistribute even 1–2 per cent of the population.

There are obvious disadvantages in the simplification that is necessary in any attempt to establish a model of the formation of population redistribution policy. One may begin by taking note of a recent review[7] in which a distinction is made between research and policy models: the authors conclude that a model for either purpose cannot be used readily for the other. Policy models have to be developed systematically by means of specification in terms of intended purpose and the essential requirements of such models include: time span; lead and impact time; tailoring to a narrow or broader range of objectives; causality as it affects alternative courses of action; heterogeneity, differentiation and inequalities among units as a characteristic of the system; appropriate aggregation/disaggregation (such as urban/rural sector and socio-economic class); recognition of uncertainty to the extent that it does not alter the policy outcome of the model (exogenous variables, relationships of the model etc.); and the relative sensitivity and robustness of the model, both of these aspects being affected by the scope, time-scale and information input of the model. In terms of time-scale, it may be helpful to consider proximate, intermediate and ultimate goals, possibly in the context of a current five-year plan and a 20-year perspective or outline plan. Taking the exam-

[5] Without entering into any debate here on "optimal population size" or "optimal city size", it appears more useful to distinguish between actual and planned or projected population sizes.

[6] John Connell and others, *Migration from Rural Areas: The Evidence from Village Studies* (Delhi, Oxford University Press, 1976); and R. J. Pryor, op. cit.

[7] K. S. Srikantan and Alfred Blumstein, "Policy applications of population models: a comparative review", *Socio-Economic Planning Sciences*, vol. 11, No. 1 (1977), pp. 1–11.

ple of urban dispersal policies, a policy model could consider proximate goals of decentralization of infrastructure, services and employment; intermediate goals of reducing migration to the largest centre(s) and its redirection to smaller destinations; and ultimate goals of reducing or eliminating certain problems associated with metropolitan size and high primacy, such as congestion, poverty, crime, poor housing and services.[8]

A recent study[9] identified three approaches to policy which overlap the time categories given above but add the dimension of intensity: the incremental approach; the interventionist approach; and the radical-reformist approach. These three approaches are interdependent and interactive, rather than mutually exclusive; but the political orientation of a country often determines the emphasis on one approach more than another. The question of identifying underlying values is of importance here.[10] Under one value system, a reformist approach would attempt to regulate or reverse urbanization by way of a package of direct policies. Under a different value system, the radical approach to policy might consider rapid urbanization to be central to the process of modernization and hence encourage urbanization by emphasizing economies of scale.[11]

In purely descriptive terms, the population redistribution policy of a country can be seen as reflecting the changing character and spatial ("horizontal") distribution of modernization and development, and the qualitative ("vertical") aspects of the institutional and socio-cultural milieux, which is symbolized by:

$$P_R = f(D,R,\ P,\ M,S,\ I,E,\ C,X)^t$$

where P_R is the redistribution policy;

D identifies the broad development goals of the country;

R symbolizes the land, water, mineral and other resources of the physical environment;

P refers to the demographic structure, acknowledging that differentials by age, sex, ethnicity and marital status are relevant to the propensity to migrate; and eugenic and natalist policies may be reflected in the population at risk;

M refers to the migration system, the trends in net redistribution through voluntary or spontaneous migration, with the specific structure of streams and counter-streams suggesting policy alternatives;

S symbolizes the spatial and rank-size structure of the settlement system which provides the framework for any population redistribution;

I stands for the institutional structure, the administrative and formal communications networks within which the bureaucracy implements policies;

E refers to the socio-economic structure, reflecting the level of development and the relative importance of the modern and traditional sectors;

C is the cultural setting of the society which is directly relevant to the initiation, development and implementation of redistribution policies;

X acknowledges the external links of the country with the international politico-economic system and the source both of some innovations and of defensive reactions;

t indicates the time-dependency of the "system state" and temporal changes in policy goals and programmes.

The flow-chart shown in figure IV summarizes one view of the evolution and implementation of population redistribution policy, with all the disadvantages of any diagrammatic representation of complex and changing societal and political behaviour. The core of the model is the relative agreement or otherwise of the existing settlement pattern and migration system with the relevant development goals of the country. Policy, the principles on which any measure or course of action is based, derives passively from the matching of actual and desired distributional patterns and actively from their dissonance. Redistributional policy originates in: (*a*) the development environment, including the physical and human resources; and the settlement, institutional, political and cultural systems; (*b*) the endogenous and exogenous forces of societal change, many of which cannot be quantified; (*c*) sectoral and regional analysis for the general purpose of development planning in a given socio-political setting; (*d*) the codification of societal values in the promulgation of national economic and social development goals.

The identification of the existing migration patterns depends upon census, vital statistics and other estimates of the matrix and structure of flows through the national settlement system. Many countries are only now beginning to collect adequate data for longitudinal analyses of the volume, direction and characteristics of internal migrants, the necessary preliminary stage for the determination of the extent to which actual patterns of movement are in accord with development goals. This determination of compatibility depends upon the prior assessment by planners of the population distribution that will most nearly meet regional and sectoral development goals and upon the identification of goals with direct and indirect implications for population relocation. Indirect policies are more common, are consequential and subsidiary to other goals, are implicit or non-purposive, have no specification or direct structural linkages and are not moni-

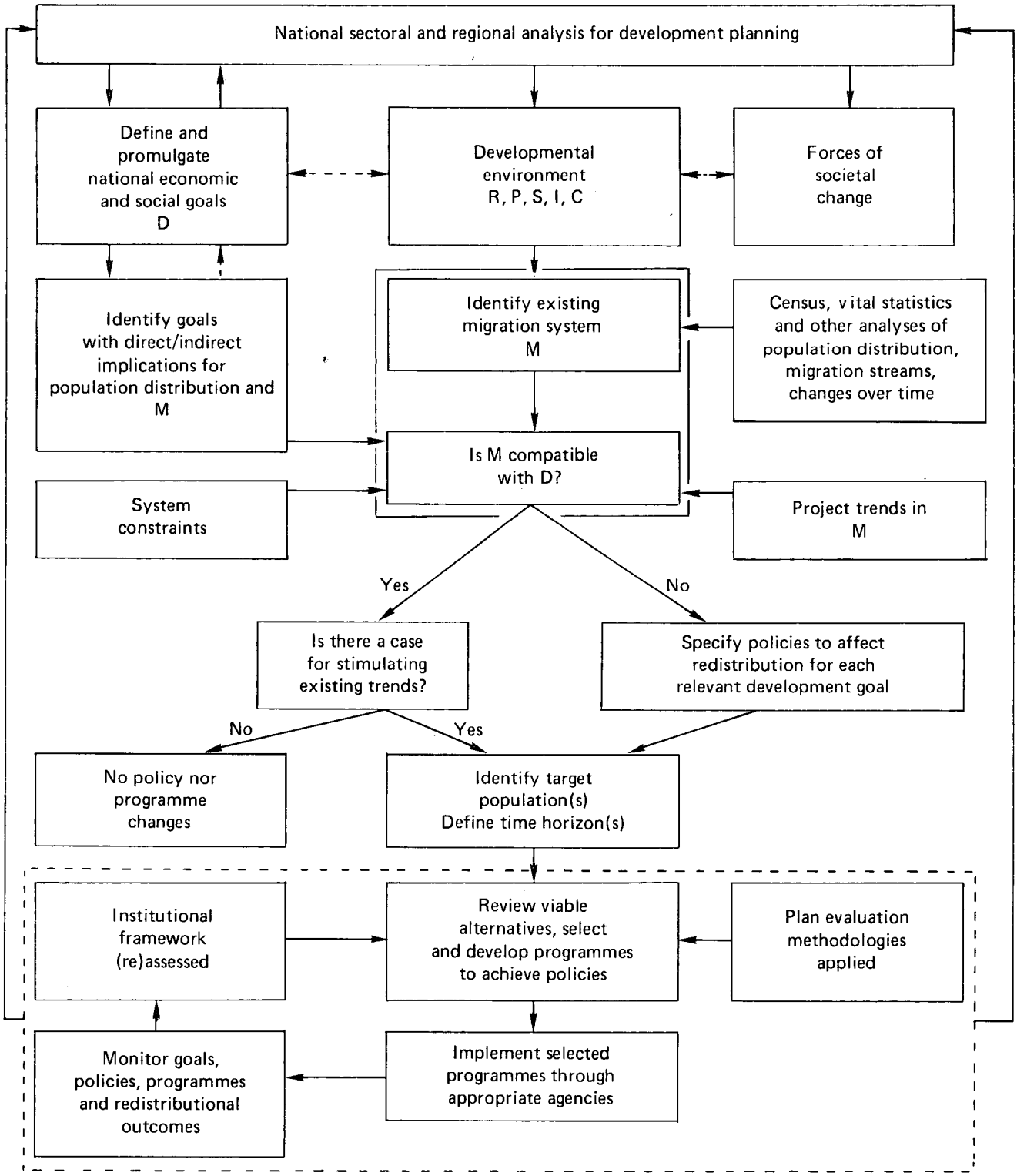
[8] Joan Nelson, "Population redistribution policies and migrant's choices", paper prepared for the Seminar on New Conceptual Approaches to Migration in the Context of Urbanization, organized by the Committee on Urbanization and Population Redistribution of the International Union for the Scientific Study of Population, Bellagio, Italy, 30 June–4 July 1978 (mimeographed); see also D. A. West and others, "A conceptual framework for policy-related research on migration", *Land Economics*, vol. 52, No. 1 (February 1976), pp. 66–76.

[9] G. Pyatt and E. Thorbecke, *Planning Techniques for Better Planning* (Geneva, International Labour Office, 1976).

[10] M. Rein, *Social Science and Public Policy* (Harmondsworth, Penguin Education, 1976).

[11] See also United States Agency for International Development, "The new urban debate", conference report for the Pacific Conference on Urban Growth, Washington, D.C., 1967.

Figure IV. Model policy evolution and implementation



Legend

R resources (land, water, minerals etc.)
P demographic structure
S settlement system (spatial/rank-size structure)
I institutional structure (administrative framework)
C cultural setting
D development goals
M migration system

tored in terms of migration impact. The rarer direct policies are deliberately created, have explicit redistributional intentions, are specified in some detail and are usually linked both to goals and projects; their impact or outcomes can be more effectively monitored and evaluated. It is also necessary at this stage to project regional population growth trends by their natural increase and migration components.

The analysis of system constraints is another difficult but necessary exercise in policy evolution. Costs, political acceptability, the distribution of natural resources and manpower availability—in quantity and quality—are among the more obvious constraints. The nature of the existing central place or settlement hierarchy can be a major constraint in a country such as Thailand with one large (primate) city and a relative dearth of middle-range towns as alternative destinations for urban in-migrants. The population's willingness to change, to move to a pioneer settlement area or growth centre, can be an important factor, as has been pointed out in the more general context of regional planning.[12]

Assuming that existing processes of mobility or immobility have to be modified, the key question is which policies, implemented when, where and through what machinery, can realistically be expected to begin to achieve the desired distribution. It becomes necessary to define the target population by regional location and/or differentiating characteristics within areas and communities of potential out-migration. At least three factors are relevant in defining the population required to change to meet the demands of policy and for assessing the policy impact: the degree of organization and institutionalization of the target group; the leadership and coherence of the target group; and the previous experience of the target group, which may determine whether they will be compliant, indifferent or rebellious.[13]

Occasionally, it may be adequate to "tinker" with the system and encourage existing migration trends. New goals require new policies, possibly with outside technical or financial assistance and the testing of the relevance of the experience of other countries. Policy options are generally known but cannot be transferred unmodified from one region or country to another. Only limited knowledge exists of the interrelationships between economic development and the demographic and mobility transitions. It is difficult enough to measure the relative success of a redistributional policy, let alone convince a government minister or agency that the programme of another country should be emulated in a different setting. The removal of protection from a particular industry or the decentralization of government offices may be appropriate and effective in one region at a particular stage of development, but inappropriate and counter-productive at another time or in another place. In one situation it may be efficient to encourage migration by a differential income policy; in another situation it may be more realistic to locate labour-intensive economic activities in a depressed region suffering underemployment or unemployment. An adequate knowledge of policy options, the services of experienced planners or consultants and the application of relevant plan evaluation methodologies contribute to the selection and development of the optimal programme or package of programmes to achieve policy goals.

The monitoring phase commences simultaneously with the implementation of the selected programme and ideally is concerned with goals, policies, programmes, redistributional outcomes, the institutional framework, policy innovations elsewhere, changes in the migration system and wider developmental environment, and changing national social and economic goals. Specifically, it is necessary to monitor the outcomes of migration policy in the spheres of temporary and permanent population movements; and with more difficulty, the links between migration and national and local employment, income levels and regional differentials, and a range of indices of the level of living.

Census data provide basic knowledge of major population movements at intervals of 5 or 10 years, but more frequent monitoring is essential for any fine-tuning of policy. Specialized migration surveys are now fairly widespread in the less developed countries, at least on an *ad hoc* basis. Existing registration systems provide further avenues. Using systematic samples, change-of-address records for identity cards and electoral rolls have been used to monitor migration between censuses in Malaysia[14] and existing records could be used to monitor *pindah* and *merantau* in Indonesia.[15] The national survey apparatus set up for the World Fertility Survey can be adapted by appropriate modules to the monitoring of both planned and spontaneous migrations, temporary and permanent movements, rural/urban linkages, the flow of remittances and the links between the demographic and mobility transitions as modernization proceeds.[16] Registration systems and sample surveys can help determine the efficacy or otherwise of growth-pole strategies and settlement schemes.

The institutional arrangements for adequate moni-

[12] D. Bronger, "Problems of regional analysis and regional planning in developing countries", *Philippine Geographical Journal*, vol. 21, No. 1 (1977), pp. 14–38.

[13] T. B. Smith, "The policy implementation process", *Policy Sciences*, vol. 4 (1973), p. 204.

[14] Robin J. Pryor, *Spatial Analysis of Internal Migration: West Malaysia*, Monograph Series, No. 5 (Townsville, James Cook University, Department of Geography, 1974).

[15] Graeme J. Hugo, *Population Mobility in West Java* (Yogyakarta, Gadjah Mada University Press, 1978); and idem, "New conceptual approaches to migration in the context of urbanization: a discussion based on Indonesian experience", paper prepared for the Seminar on New Conceptual Approaches to Migration in the Context of Urbanization, organized by the Committee on Urbanization and Population Redistribution of the International Union for the Scientific Study of Population, Bellagio, Italy, 30 June–4 July 1978 (mimeographed).

[16] Robin J. Pryor, "Population redistribution and the demographic and mobility transitions: hypotheses from African and Asian fieldwork", paper prepared for the International Geographical Union Symposium on Population Redistribution in Africa, Zaria, Nigeria, 25–31 July 1978 (mimeographed).

toring have received very little attention, despite the acknowledged difficulties of measurement and the political as well as economic advantages of policies and projects perceived as successfully achieving their goals. In system terms, an adequate sensor mechanism must be interposed between the instrument variable (e.g., government agency or private employer) and the intermediate outcome (policy instrument or programme), with particular concern for problems of implementation, divergence from policy and identification of unmet needs. Before corrective action can be taken or the overall policy modified or replaced, the monitoring agency has to be able to determine when, where and why a deviation or failure of implementation occurred; the extent, nature and intensity of the deviation; and the resources and expertise required for remedial action. Large-scale programmes, such as transmigration in Indonesia or regional agricultural development in Malaysia, require major monitoring measures by specialized agencies. Policies with direct and even indirect implications for population redistribution should be analysed in terms of their compatibility with government activities in other areas; such non-governmental activities as regional employment policies of large-scale employers like heavy industry or banks; staff capability, specialization and retraining; and the perceived or expressed needs of the community. A recent policy-related study[17] examines potential sources and characteristics of migration to the Pahang Tenggara region in Malaysia. Potential migrants were interviewed, the characteristics of actual movers and stayers were compared and those interested or uninterested in moving to land development schemes were identified and compared. By projecting the number of potential migrants it was possible to identify the states in which recruitment would be most efficient; it was also concluded that a special effort would have to be made to reach the poorer, landless and non-Malay segments of the population.

This model is "ideal" in that it assumes a direct policy with a logical rationale and measurable outputs; it is unrealistic in that many redistribution policies can be expected to be implicit, indirect, unmeasurable and the result of policies and programmes with different if not conflicting objectives. As a matter of principle, it is desirable to treat policy goals as intermediate rather than ultimate—hence, the feedback loop in the model, signifying constant re-evaluation and redefinition of goals as well as of policies and programmes. This point also stresses the historical and time-dependent perspective: some demographic problems are intractable to change by policy; the environment changes so that old solutions no longer fit the new circumstances; and inadequate capital and political resources mean that a fragmented approach is unavoidable at a given point in time. Policy derives from compromise among contending ideals, purposes and interests in the sphere of population redistribution as in all matters of social policy, so "orthodoxy" relates to programme acceptibility and feasibility in a fluid political environment. The summary given in figure IV can barely hint at these dynamics of policy evolution.

B. Policy implementation

The tactical, management and executive aspects of policy evolution are often neglected in models of policy processes, in part because it is assumed that when a legislative body "adopts a policy and appropriates money for it, and when the executive branch organizes a program, hires people, spends money, and carries out activities designed to implement the policy, the effects of the policy will be felt by society and the effects will be those intended by the policy."[18]

These are obviously major and sometimes unwarranted assumptions, and the reasons for the range of possible shortfalls are legion. Perhaps the major factor is that less developed countries, by definition unable to engage in the kind of incremental policy-making feasible in developed countries, have introduced ambitious policies designed to change the development and modernization status of the country in short order. The tensions and strains induced by some recent radical urban dispersal policies in Eastern South Asia provide extreme examples of the outcome of such morphogenic approaches to policy implementation.

There are at least four main components of the policy implementation process: the policy as promulgated in a national development plan or elsewhere; the executing agency or organization; the target population; and environmental factors. Three of these components have already been discussed in reference to the model shown in figure IV. The executive agency is usually a government department or a quasi-autonomous instrumentality funded by and responsible to the Government. As with any policy implementation, many elements contribute to the success or otherwise of the operation of an agency in population redistribution: the clarity and feasibility of goals and their implementing programmes; the style and effectiveness of leadership and management; the articulation and stability of the agency structure; the experience and qualifications of the personnel; effective communication within the agency and between it and the responsible government minister and target group; and the general capacity of the agency to implement its programme in scope and detail. Implementing measures in general have been classified[19] as follows:

(*a*) Policy instruments, including fine-tuning instruments (e.g., subsidy rates, removal of artificial price distortions, public utility pricing, removal of discriminatory market imperfections), fiscal instruments and transfers, monetary and credit policy and public investment and choice of projects;

[17] P. F. Kaplan and others, *Potential Migration Study for the Pahang Tenggara Region* (Kuala Lumpur, Lembaga Kemajuan Pahang Tenggara, 1977).

[18] Thomas R. Dye, *Understanding Public Policy* (Englewood Cliffs, New Jersey, Prentice-Hall, 1972), p. 291.

[19] G. Pyatt and E. Thorbecke, op. cit., p. 62.

(*b*) Structural changes and policy reforms, including land reform, changes in ownership of other physical capital assets and educational reforms.

Each of these categories and subgroups, if pursued in detail, suggests various possible ways of intervening in population distribution processes; land reform, promotion of industrialization as against agriculture or the modernization of agriculture would all require major reorganization of executive agencies in a developing country.

The potential avenues for policy implication are very diverse, which is made evident throughout this publication. A few of the typologies of intervention measures in population distribution are given below; as can be seen, different approaches have different emphases. Findley's[20] classification focuses on the direction of flows and whether they are to be encouraged, slowed, restricted or redirected:

(*a*) Slow rural out-migration (employment and income policies, integrated rural development, dispersed urbanization);

(*b*) Redirect rural out-migration (rural settlement and colonization);

(*c*) Channel urban migrants to selected destinations (growth poles in middle-sized cities, regional development);

(*d*) Encourage migration to major metropolis (capital-intensive agriculture, import-substitutive industry);

(*e*) Cope with urban in-migrants (job creation in informal sector, housing and land use policy, extension of social services);

(*f*) Restrict migration to metropolitan areas (permit systems).

Weiner's[21] emphasis, on the other hand, is on instruments as such:

(*a*) Disposition of public services in urban and rural areas;

(*b*) Income policies in urban and rural areas;

(*c*) Administrative decentralization;

(*d*) Industrial location of regional development;

(*e*) Pass laws, internal passports, work permits, food ration cards, residence permits;

(*f*) Preferential interventions in land purchase, job selection, employment quotas;

(*g*) Links with international migration policies in selection and destination;

(*h*) Multiplier effects, e.g., tax subsidies that may attract industry, employees, housing, service infrastructure, private business etc.

In addition to the two sources discussed here, there are a number of works containing general classifications,[22] as well as studies that give country or region-wide classifications.[23]

It is difficult, and perhaps not particularly useful, to generalize about the detailed institutional arrangements that flow from the articulation of goals, policies and programmes. Institutional arrangements are even more sensitive to temporal, regional and other variations than policies, which, as has been seen, are very culture-specific and time-dependent. After a few introductory remarks, three country case studies are used below to illustrate the avenues through which selected policies have been implemented. Experience reported in this volume and elsewhere suggests that strong, multifaceted and nation-wide policies are most readily put into operation and most successful. Indirect policies have been most successful in curbing urban inflows and slowing rural out-migration, while direct policies have been effective in channeling urban dispersal—for example, through government or industrial decentralization—and in redirecting rural movements, as in pioneer settlement projects. Reorientation and attraction have proved more effective than attempts at prohibition or expulsion—due no

[20] Sally Evans Findley, *Planning for Internal Migration: A Review of the Issues and Policies in Developing Countries*, International Statistical Programs Center Research Document, No. 4 (Washington, D.C., United States Bureau of the Census, 1977). The reader is referred especially to tables 9–11, which contain the best available summary: table 9 concerns factors influencing migration flows, by their strength of influence; table 10, the types of migration impacts, according to potential policy responses; and table 11, policy options, according to implementation problems and the evaluation of policy effects.

[21] Myron Weiner, "Internal migration policies: purposes, interests, instruments, effects", in Warren F. Ilchman and others, eds., *Policy Sciences and Population* (Lexington, Massachusetts, Lexington Books, 1974), pp. 65–94.

[22] See G. F. de Jong, "Population redistribution policies: alternatives from the Netherlands", revision of paper presented at the Annual Meeting of the Population Association of America, New Orleans, Louisiana, 1973 (mimeographed); D. G. Stillman, *Population-related Policy: A Framework for Analysis with Examination of Two Cases (Togo and Ghana)*, final report submitted to the United States Agency for International Development (Washington, D.C., 1974); R. W. Crowley, loc. cit.; V. Whitney, op. cit.; Roland J. Fuchs and George J. Demko, "Population redistribution measures and the redistribution mechanism"; and Alan B. Simmons, "A review and evaluation of attempts to constrain migration to selected urban centres and regions", chaps. VI and VII, respectively, in the present volume.

[23] For Africa, see Derek Byerlee, "Rural-urban migration in Africa: theory, policy and research implications", *International Migration Review*, vol. 8, No. 4 (Winter 1974), pp. 543–566; D. G. Stillman, op. cit.; A. Adepoju, "New conceptual approaches to migration in the context of urbanization: the case of Africa south of the Sahara", paper prepared for the Seminar on New Conceptual Approaches to Migration in the Context of Urbanization, organized by the Committee on Urbanization and Population Redistribution of the International Union for the Scientific Study of Population, Bellagio, Italy, 30 June–4 July 1978; K. E. Vaidynathan, "Population distribution policies: an overview of African examples", paper prepared for the International Geographical Union Symposium on Population Redistribution in Africa, Zaria, Nigeria, 25–31 July 1978 (mimeographed); and J. B. Riddell, "The migration to the cities of West Africa: some policy considerations", *Journal of Modern African Studies*, vol. 16, No. 2 (1978), pp. 241–260.

For Asia, see A. A. Laquian, "Coping with internal migration in the Philippines: problems and solutions", in J. F. Kantner and L. McCaffrey, eds., *Population and Development in Southeast Asia* (Lexington, Massachusetts, Lexington Books, 1975); R. B. Ocampo, "Policies and programs that influence spatial mobility", Research Reports, No. 3, Manila, University of the Philippines, College of Public Administration, 1976 (mimeographed); and R. J. Pryor, *Migration and Development in South-East Asia: A Demographic Perspective*.

doubt to the resourcefulness of human nature when faced with "closed-city" regulations or compulsory squatter relocation programmes.

The scale factor is relevant to an understanding of institutional arrangements. Policy arenas affecting population distribution (such as industry, agriculture, housing and transport), if classified by level of implementation (nation-wide, state or province, region, city or community), imply the creation of many governmental agencies and private enterprises in an organizational hierarchy. This point is made not to argue for a great bureaucratic apparatus, but simply to acknowledge that the management of a local land development scheme has different functions than does a state agricultural development agency or a national ministry of agrarian reform. The temporal factor should also be reiterated. In the early stages of economic development and modernization, a national settlement policy may stress the achievement of minimum environmental standards in cities and towns; as the transition to metropolitanization occurs, the policy emphasis may shift to offsetting negative effects of uncontrolled growth and initiating a multinuclear growth-centre strategy; still later, the focus of policy may be towards augmenting urban services and upgrading obsolete transport and communications. Budgetary constraints may slacken over time; the spatial orientation may expand from primate city to regional and national planning. Policy values may move from remedy to intervention or radical reform. Here too, different institutional arrangements would be required successively, at all scales and in all policy arenas impinging on population distribution.

C. Country case studies

Regional development in the Philippines

In the Philippines, the four-year development plan (1974-1977)[24] focused on regional development to relieve urban unemployment and on agrarian reform measures to upgrade rural incomes and levels of living. Policy attributes and regional strategies relevant to population redistribution have been analysed elsewhere;[25] but a wide range of rural and urban programmes has been implemented, articulated through 11 development regions, provinces, local government and *barrio* associations. A recent paper[26] carries out an introductory analysis of direct and indirect population redistribution policies operating through a variety of Philippine government agencies. Nineteen types of programmes are identified as influencing migration, and some 37 agencies are classified according to the nature of their impact on population distribution. In a fairly general way, this classification permits the identification of the migration-relevant impact of the various programmes and specific agencies. Table 15 lists the programmes, impact and agencies concerned. Within the general context of national development goals, a wide range of instrumentalities have been involved at many levels. Other countries have many parallel agencies, but some are quite specific to the current goals and development problems of the Philippines.

[24] Philippines, National Economic Development Authority, *Four-Year Development Plan FY 1974-77* (Manila, 1973).

[25] R. J. Pryor, *Migration and Development in South-East Asia: A Demographic Perspective*, tables 21.1 and 21.2.

[26] R. B. Ocampo, op. cit.

Table 15. Programmes and agencies influencing population redistribution in the Philippines

Programmes and activities	*Programme/agency impact*[a] *I*	*II*	*III*	*IV*	*Agencies*[b]
1. Frontier colonization and homesteads	x	—	—	—	BL, NARRA
2. Resettlement of former Huks	x	—	—	—	DND, EDCOR
3. Resettlement of urban squatters to rural areas	x	x	—	x	PAHRA, LTA
4. Industrial estates	x				PES, BOI, NEC
5. New towns	x	x	—	x	PES, PHHC, CITRUS, NEC
6. Highways and infrastructure development, irrigation	x	—	—	—	BPW, PBH, LG, ISU
7. Relocation from disaster areas, military operation zones, stricken areas	—	x	—	—	DND, DSW, PNRC
8. Natural-resource conservation, reforestation	—	x	—	—	DNNR, BF
9. Administrative regionalization	—	x	x	—	GSRC, LGRC
10. Manpower training and development	x	x	x	x	BL, PACD, CITRUS
11. Intra-urban relocation and land tenure	x	x	x	x	PHHC, BL, DSW
12. Public housing	x	x	x	x	PHHC, BPW, LGs, SSS, DBP, GSIS, NHC
13. Welfare, health and urban poor services	—	—	—	x	DSW, DH, LGs
14. Utilities and other urban services	—	—	—	x	LGs, NAWASA, BPW
15. Land reform	—	x	x	—	BL, CAR, LRC
16. Sites and service schemes for squatters	x	—	x	x	PHHC, CITRUS, LTA, DND

TABLE 15. *(continued)*

Programmes and activities	*Programme/agency impact*[a] I	II	III	IV	*Agencies*[b]
17. Cottage industries	—	—	x	x	NACIDA, ACA, DSW, PACD
18. Rural credit, price supports, co-operatives	x	—	x	—	CAO, ACA, RCA, RBs
19. Agricultural extension		—	x	—	BAE, CAP, BAI, PACD
20. Housing finance	x	—	x	—	PHHC, GSIS, SSS, HFC
21. Rural electrification	x	—	x	—	REA, NPC, SEC

Source: R. B. Ocampo, "Policies and programs that influence spatial mobility", Research Reports, No. 3, Manila, University of the Philippines, College of Public Administration, 1976 (mimeographed).

[a] Programme/agency impact:
I. Encourages people to move to certain areas.
II. Discourages people from moving to, or staying in, certain areas.
III. Encourages people to stay where they are.
IV. Copes with problems arising from internal migration.

[b] The agencies of the Government of the Philippines referred to are:

ACA:	Agricultural Credit Administration
BAE:	Bureau of Agricultural Extension
BAI:	Bureau of Animal Industry
BL:	Bureau of Lands
BPH:	Bureau of Public Highways
BPW:	Bureau of Public Works
BOI:	Board of Investments
CAO:	Cooperatives Administration Office
CAR:	Court of Agrarian Relations
CITRUS:	Central Institute for the Training and Rehabilitation of Urban Squatters
DANR:	Department of Agriculture and Natural Resources
DBP:	Development Bank of the Philippines
DH:	Department of Health
DND:	Department of National Defense
DSW:	Department of Social Welfare
EDCOR:	Economic Development Corporation
GSIS:	Government Service Insurance System
GSRC:	Government Survey and Reorganization Commission
HFC:	House Financing Commission
ISU:	Irrigation Service Unit
JLGRC:	Joint Local Government Reform Commission
LGs:	Local governments (provinces, cities, municipalities)
LTA:	Land Tenure Administration
LRC:	Land Reform Commission
NARRA:	National Resettlement and Rehabilitation Administration
NEC:	National Economic Council
NPC:	National Planning Commission
NPC:	National Power Corporation
NAWASA:	National Waterworks and Sewerage Authority
PACD:	Presidential Assistant on Community Development
PAHRA:	Presidential Assistant on Housing and Resettlement Administration
PES:	Presidential Economic Staff
PHHC:	Peoples Homesite and Housing Corporation
PNRC:	Philippine National Red Cross
REA:	Rural Electrification Administration
SEC:	Securities and Exchange Commission
SSS:	Social Security System

Metropolitan dispersal at Seoul, Republic of Korea

The third five-year economic development plan (1972-1976)[27] of the Republic of Korea placed particular stress on curbing in-migration to Seoul and was directed towards promoting a regionally balanced economy, developing and improving rural areas and improving the quality of life of workers. Large-scale investment was directed to regional industrial centres in order to reorient the existing migration system. Wide areas around Seoul were designated as green belts to limit urban growth; the New Community Movement was promoted by the Government to foster rural development; 11 regional industrial parks were designated; work on the satellite city of Seongnam began (now contributing to the expansion of Seoul); student transfers to Seoul were restricted, as was the establishment and expansion of colleges at Seoul; and taxes were imposed on residents and factory con-

[27] Republic of Korea, *The Third Five-Year Economic Development Plan: 1972-1976* (Seoul, 1971).

struction at Seoul. One assessment has criticized the lack of interaction and co-ordination between programmes, the over-concentration of attention on the Seoul area and the introduction of *ad hoc* measures with inadequate legal and institutional foundations.[28] Nevertheless, the growth of Seoul slowed from nearly 10 per cent per annum in the late 1960s to 4.5 per cent by 1975. Some factors contributing to this relative success include ethnic homogeneity, almost universal elementary education, a stable authoritarian Government with competent administration and central planning, a booming economy, a strong municipal government at Seoul working in tandem with national government agencies to enforce disincentives to investment and in-migration, a decline in the rural population growth rate and a closing of the urban/rural income differential.[29]

More recently, the growth of Seoul has been treated as an integral component of the national security policy of the Republic of Korea; and in March 1977, the goals and framework of a new national population redistribution plan were promulgated. This plan includes short-term measures to restrict in-migration to Seoul, to facilitate out-migration from Seoul and to accommodate the dispersed population in other regions. Longer term measures focus on a national industrial relocation programme and the construction of a new administrative capital. The new policy measures shown in table 16 are much wider in scope than previously, are tied to a 15-year (1977-1991) economic and land development plan and represent the upgrading of population redistribution to an issue of national priority unequalled in the region. Analysts are, nevertheless, not convinced "that the new policy and plans will be as successful as those who designed them hope".[30]

Land development in Malaysia

The third Malaysia plan, 1976-1980[31] (Malaysia, 1976) contains a greater emphasis than its predeces-

[28] S.-V. Kim and P. J. Donaldson, "Dealing with Seoul's population growth: government plans and their implementation", *Asian Survey*, vol. 19, No. 7 (July 1979), pp. 660–673; and Eui-Young Yu, "Growth and development of Seoul Metropolitan Region", *Philippine Economic Journal*, vol. 16, Nos. 1–2 (1977), pp. 213–227.

[29] J. Nelson, op. cit.

[30] S.-V. Kim and P. J. Donaldson, loc. cit., p. 673.

[31] Malaysia, *Third Malaysia Plan, 1976-80* (Kuala Lumpur, Government Press, 1976).

TABLE 16. REPUBLIC OF KOREA: PROGRAMMES AND AGENCIES OF THE POPULATION REDISTRIBUTION PLAN, 1977

Policy measures	*Agencies*
I. Policy measures restricting in-migration to Seoul metropolitan area	
(A) Regulation of new construction and expansion of industrial facilities outside industrial zones	Ministry of Commerce and Industry
(B) Regulation of land utilization	Ministry of Construction
(1) Restricting and reducing semi-industrial zones north of Han River	
(2) Expansion of green-belt area surrounding Seoul	
(3) Reducing urban density through expansion of public parks, roads, parking spaces etc.	
(C) Regulating construction of public buildings north of Han River	
(D) Restricting expansion of higher education in Seoul	Ministry of Education
(1) Restricting establishment or expansion of college departments at Seoul	
(2) Restriction of establishment of high schools north of Han River	
(E) Regulating school transfers into Seoul	
II. Policy measures encouraging dispersal of population from Seoul	
(A) Intensification of surveillance of unlawful housing construction	Ministry of Construction
(B) Urban renewal of squatter area and ban of substandard housing	
(C) Registration of all industrial facilities and removal of target facilities based on factory location in terms of industrial zones, industrial pollution standards and future expansion plans of individual firms	Ministry of Commerce and Industry
III. Measures for regional accommodation and development	
(A) Selection of industrial patterns for each growth-pole area	Ministry of Commerce and Industry and Ministry of Construction
(B) Increase in regional educational capacities and promotion of regional educational standards through government funding	Ministry of Education
(C) Encouraging family-unit moves and regional transfer of civil servants	Ministry of Public Information

TABLE 16. (*continued*)

Policy measures	*Agencies*
IV. Building-up of institutional and related legal structures	
(A) Amendment of land-use law to eradicate possible sources of land speculation inhibiting regional development through regulation of prices in development areas; regulation of land marketing mechanism and rental rates	Ministry of Construction
(B) Amendment of tax laws: income tax; corporation tax; and other local taxation through exemption or rebate to encourage regional development	Ministry of Finance and Ministry of Home Affairs
(C) Financial subsidy and support to induce industrial facilities to move	Ministry of Finance and Ministry of Commerce and Industry
(D) Legislation of new capital city construction law and regional industry reallocation law	Ministry of Construction
(E) Establishment of operating funds: fund for industry reallocation; funds for urban renewal in Seoul metropolitan areas	Economic Planning Board and Ministry of Finance

Source: S.-V. Kim and P. J. Donaldson, "Dealing with Seoul's population growth: government plans and their implementation", *Asian Survey*, vol. 19, No. 7 (July 1979), pp. 660–673.

sors on regional rather than sectoral planning, on urban and agro-industrial industrial development rather than rural-oriented planning and on social (or socio-economic) rather than economic planning. The key overall goal is national unity by means of the two prongs of the New Economic Policy: the eradication of poverty; and the correction of economic imbalances. The third plan specifically recognizes the need for selective relocation of people to areas where development opportunities and potentials exist, especially as the labour force for land settlement and other development projects in population-scarce areas.

Rural development is a major goal, contributing to the modernization of agriculture, the advancement of the Malay population and the opening up of new land; and as a key to land reform.[32] Alongside other strategies focused on expanding the economic base, establishing growth centres and fostering the dispersal of industries away from the Kelang Valley and Kuala Lumpur, a major thrust has been a variety of land schemes: fringe alienation schemes; controlled alienation schemes; youth schemes; state schemes; group settlement or block-replanting schemes; and the major agency, the Federal Land Development Authority (FELDA).

FELDA has undergone major changes and expansion since its inception in 1956 and has now developed 1.2 million acres of land spread over 262 land schemes; oil-palm accounts for 62 per cent of the acreage, followed by rubber with 35 per cent. There are about 53,000 FELDA settlers, plus their families, each family on a 10-acre agricultural holding and quarter-acre house lot. The three main developments in the past decade have been:

(*a*) The movement from small land schemes to large-scale regional development (three schemes in Pahang and Tohore total 700,000 acres), providing greater efficiency and economies of scale linked with small growth poles;

(*b*) The establishment of FELDA marketing and processing facilities and an increased level of research to diversify crops;

(*c*) The setting-up of the Settler Social Development Division to facilitate the overall responsibility of modernizing the rural Malay.[33]

Table 17 lists the activities carried out in the various development stages of the typical FELDA scheme, indicating something of the institutional arrangements adopted. FELDA, albeit through relatively capital-intensive operations, has undoubtedly contributed to large-scale regional development and agricultural modernization. Criticisms relate to costs, the lack of crop diversification, the small proportion of the rural population served, the emphasis on the Malay community and the question whether FELDA has actually catered for the poorest and the landless. It has been argued that the success of FELDA has been due to strong political support and almost unlimited financial backing.[34] The structure of FELDA has evolved to meet its own expanding role in land development and modernization in Malaysia, so its adaptability to other countries is limited by this factor and the necessary political and financial backing. It demonstrates, how-

[32] R. J. Pryor, ed., *Migration and Development in South-East Asia*, chaps. 10 and 22; and Tunku Shamsul Bahrin, "Land settlement: policies and practices in South-East Asia", ibid., chap. 24.

[33] Colin MacAndrews, *Mobility and Modernisation: The Federal Land Development Authority and Its Role in Modernising the Rural Malay* (Yogyakarta, Gadjah Mada University Press, 1977).

[34] Ibid., p. 203.

TABLE 17. MALAYSIA: STAGES AND SCHEMES INVOLVED IN LAND SETTLEMENT SCHEMES OF THE FEDERAL LAND DEVELOPMENT AUTHORITY

Stage	*Agents and programmes*
1. Pre-selection	FELDA selects settlers on a weighted point system.
2. Development	FELDA contractors clear jungle, plant main crop and maintain crop till arrival of settlers. Public Works Department constructs roads, water-supplies, schools and a clinic. FELDA contractors build settler houses. Settlers enter project 2.5–3 years after initial land clearing.
3. Maintenance	Settlers carry out weeding, manuring, and pest and disease control; they receive subsistence credits until land is in production. FELDA staff train settlers and supervise work.
4. Repayment	Settler commences repayment of loan five years (oil-palm) or six years (rubber) after planting; loan is at 6.25 per cent per annum for cost of land development, fertilizers, subsistence and house. FELDA provides processing and marketing facilities; and fertilizer and other inputs on a charge basis.
5. Ownership	Settler obtains title to land after 15 years of repayment.
6. Continuing operations of FELDA	1. Agricultural Research Centre, Tekam 2. Training centres and schools for administration and management, agricultural techniques and community development 3. Institute of Land Development: staff training at higher levels; socio-economic research 4. Other projects: trading, marketing, latex handling, transport, mills, security and agricultural corporations and various joint ventures

Source: Malaysia, Federal Land Development Authority, "FELDA and its activities", Kuala Lumpur, May 1979 (mimeographed).

ever, some of the necessary conditions for dealing with traditional land tenure and ownership systems and for integrating agricultural expansion with regional development and modernization. As with the transmigration programme in Indonesia,[35] a proliferation of functions seems inevitable when one organization has to deal with site selection, settler selection, site preparation/land development, settler capital, tenure, finance and management, and research and training.

CONCLUSION

This paper has sought to introduce the concept of policy formulation and implementation in the case of population redistribution. There has been particular concern with the developmental and regional context of policy intervention; the process of policy formulation, modelled in a fairly simple and descriptive way; and the various available avenues for policy intervention in population distribution. Some basic principles have been presented and three case studies have illustrated some of the institutional arrangements that have been adopted to implement "on the ground" national goals and development policies established at a much higher level of abstraction. It may appear a truism to reiterate the culture-specific and time-dependent or development status-dependent nature of any policy formulation and implementation, but these factors are basic to the present author's understanding of the limited prospects for intervening in the major problems of rapid urbanization in less developed countries and the even more limited prospects for transferring institutional structures from one national setting to another. The other general contextual conclusion, and an obvious one for national planners, is that it is impossible to separate for policy purposes the twin prongs of effective population control, especially in rural but also in urban areas; and multifaceted population redistribution programmes linked to a national settlement and regional development policy. The former contributes to demographic transition, the latter to the urbanization and mobility transitions.

Further research is necessary on the modelling of policy implementation, granted the provisos of the preceding paragraph. The most practical need, however, is for better mechanisms for monitoring and measuring the "planned" and "spontaneous" components of the redistributional outcomes of both direct and indirect policies. Only as these components of population change are identified can policy-makers discern the real efficacy of their policies, pursue more efficient modes of intervention, and, using their knowledge of the "natural" processes of voluntary migration, it is hoped, learn to "seed" such processes as part of their packages of policies. Lastly, there is the question of choice of strategies, a subject barely

[35] Joan M. Hardjono, *Transmigration in Indonesia*, Oxford in Asia Current Affairs Series (Kuala Lumpur, Oxford University Press, 1977); Colin MacAndrews, "Transmigration in Indonesia: prospects and problems", *Asian Survey* (1978), pp. 458–472; and Gavin W. Jones, "The transmigration programme and development planning", in R. J. Pryor, ed., *Migration and Development in South-East Asia*, chap. 17.

touched on here: what the appropriate pattern of urban and rural development is for the next two or three decades and beyond. The medium-sized city strategy and the growth-pole approach are still under debate, as is the issue of optimal population distribution. The question arises whether the latter approach is a merely academic concept or a fruitful source of insight into the values underlying government development policy. Ocampo's[36] work (see table 16) helps one to understand the roles of diverse agencies in relatively direct redistributional policies. New ways are needed to investigate the kinds of indirect and latent policies exposed by Lipton[37] as contributing so subtly to the urban bias of current policy paradigms.

[36] R. B. Ocampo, op. cit.

[37] Michael Lipton, *Why Poor People Stay Poor: Urban Bias in World Development* (Cambridge, Massachusetts, Harvard University Press, 1977).

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XIII. RESEARCH PRIORITIES AND DATA NEEDS FOR ESTABLISHING AND EVALUATING POPULATION REDISTRIBUTION POLICIES*

*Sidney Goldstein***

Rapid population growth in the less developed regions of the world, substantial increases in the size of the urban population and in the levels of urbanization and a sharp rise in the number and size of large cities all argue for increased attention to population movement as a key component in population dynamics and in urban and rural development.[1] Despite a growing awareness of the importance of spatial mobility, serious obstacles hamper any efforts to assess the impact of population movement either on the growth of rural and urban places or on the wide disparities in the quality of life that exist between and within urban and rural locations. Among the major obstacles are limitations inherent in the existing conceptual treatment of population movement as a demographic process and the corresponding lack of appropriate data.

The problem has been complicated further by the failure of many Governments to give adequate attention, either in research or in policy formation, to the importance of population movement and of urbanization as factors in national development. The paucity of appropriate information may, in part, reflect the high priority given to the control of population growth; in part, it derives from the difference of opinion, even on the part of experts, as to the exact role of population redistribution in the development process.[2] Yet, there is growing and strong evidence to suggest that government concerns with problems of population distribution and rural-to-urban migration are moving into the forefront.

The *1977 Monitoring Report*[3] of the United Nations, based on survey results obtained from 158 Governments, assesses the extent of governmental concern with spatial distribution and the degree to which policies have been adopted. Some caution should be exercised in accepting the survey results because questionnaires were completed by government officials whose level of responsibility and/or training varied. Yet, the results suggest widespread and serious concern with distribution problems. Half of the replies reported the spatial distribution of populations as extremely unacceptable; they reported that radical intervention would be desirable to bring about a substantial change either in the configuration of spatial distribution or in the volume and direction of internal flows of population or both.[4] An additional one quarter classified their spatial distribution as substantially unacceptable and regarded substantial intervention as appropriate. Only 12 per cent reported spatial distribution as entirely acceptable. Perhaps even more relevant, the degree of concern expressed varied inversely with development level (judged by average life expectancy): for only 17 per cent of the more developed countries was the spatial distribution reported to be extremely unacceptable, compared with 70 per cent of the less developed countries.

The United Nations survey also attempted to ascertain whether Governments had begun to adopt policies intended to alter undesirable distribution patterns. Again, one must recognize that responses to a survey of this type may not always accurately reflect actual policies or programmes to implement them. What is needed is careful assessment of legislation and development plans themselves. But within the limits of the survey approach, the report indicates that a substantial number of Governments not only perceive the problems; but that they have, in fact, begun to adopt policies intended to produce a significant change in the patterns of internal migration. Of the 158 Governments covered, 64 per cent of the responses reported having policies intended to decelerate movement towards metropolitan regions and other urban centres, and an additional 11 per cent cited policies that sought actually to reverse the direction of population flow. Only a small minority (22 per cent) of the Governments reported no policies of intervention and as few as 3 per cent had policies intended to accelerate the rate of population movement.[5]

The *Monitoring Report* concludes that compared with 1974, more Governments in 1976 were concerned

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[1] "Report on the Second Inquiry among Governments on Population and Development: Report of the Secretary-General" (E/CONF.60/CBP/2).

[2] Sally Evans Findley, *Planning for Internal Migration: A Review of the Issues and Policies in Developing Countries*, International Statistical Programs Center Research Document, No. 4 (Washington, D.C., United States Bureau of the Census, 1977).

[3] *World Population Trends and Policies—1977 Monitoring Report*, vol. II. *Population Policies* (United Nations publication, Sales No. E.78.XIII.5).

[4] Ibid., p. 40.

[5] Ibid., p. 50.

about the severity of the problems associated with spatial maldistribution of population and with the consequent constraints upon achievement of development objectives. Moreover, during the same two-year interval, Governments in both the more developed and the less developed regions strengthened policies designed to bring about readjustments in spatial distribution. In particular, more emphasis is being placed on policies directed towards comprehensive rural development, one component of which involves channelling the rural population to regional and subregional centres instead of to metropolitan regions. Surprisingly, Governments now appear to express more concern about their distribution and migration patterns than about excessive rates of population growth.

The strong recognition in the United Nations survey that population growth and distribution are closely linked and that both factors must be included in integrated development planning certainly justifies giving higher priority in research to population distribution and movement. Such attention becomes essential as even more Governments adopt policies intended to control the flow of population movement and the growth rate of urban and rural locations. As has been pointed out,[6] the proper formulation of population policies requires: (*a*) an understanding of the demographic processes in a descriptive sense; (*b*) an understanding of the antecedents of demographic behaviour; (*c*) an understanding of the impact of population processes; and (*d*) an evaluation of the welfare significance of conceivable policy interventions. These criteria for general population policies hold equally well for migration and population redistribution.

Yet, it is regrettable that improvements in the quantity and quality of information on population movement has not kept pace with the increasing recognition of the significance of movement in demographic change. The study of redistribution has suffered far too long from neglect within the profession. Despite repeated exhortations in the 1960s and 1970s that more attention should be given to the theory and measurement of migration,[7] serious deficiencies still characterize the conceptualization and measurement of population movement and its effects on settlement patterns. Especially now, when migration has become so important in population dynamics throughout the world, the analysis of population movement requires the high priority it should have received decades ago.

Although some less developed countries have begun to collect migration information as part of their census programmes, the use of such information for analytical purposes, and particularly for the assessment of urban growth and urbanization, is severely restricted by the limited number and kinds of tabulations made.[8] Some of these deficiencies have been overcome by specialized surveys focusing on migration.[9] Since most of these surveys focus on small areas or individual communities, particularly large cities, their value for generalizations is restricted. Furthermore, they often seriously neglect major segments of the population that are essential to the full evaluation of the migration process—those who have moved about in rural areas, those who have returned to rural areas from urban locations and those who have not moved at all. Estimates of the net number of migrants, although better than no information at all, yield only limited insights into migration as a process. There is a particularly pressing need to know much more about the magnitude of the opposing streams of movement, the extent of circulatory and repeat movement, the selective character and impact of movement in places of origin and destination, and the degree to which commuting serves to complement or substitute for migration.[10]

A growing body of research on migration[11] documents that the migration process is much more complex than the traditional published census type of information suggests. For many persons, the most recent move is only the last of a long series of moves. For some, migration involves many moves in a stepping-stone process from less developed to more developed locations or from rural to smaller urban to larger urban places; for others, the migration history may be quite random; and for still others, it might consist of a pattern of circulating moves or commuting

[6] Paul Demeny, "Population policy: the role of national Governments", *Population and Development Review*, vol. 1, No. 1 (September 1975), p. 153.

[7] Dudley Kirk, "Some reflections on American demography in the nineteen sixties", *Population Index*, vol. 26, No. 4 (October 1960), pp. 305–310; Donald Bogue, *Principles of Demography* (New York, John Wiley and Sons, 1969); Sidney Goldstein, "Facets of redistribution: research challenges and opportunities", *Demography*, vol. 13, No. 4 (November 1976), pp. 423–424.

[8] Juan C. Elizaga, "Internal migration: an overview", *International Migration Review*, vol. 6, No. 2 (Summer 1972), pp. 121–146; Sidney Goldstein and David F. Sly, eds., *Basic Data Needed for the Study of Urbanization* (Liège, International Union for the Scientific Study of Population, 1975); *idem*, *The Measure of Urbanization and Projection of Urban Population* (Dolhain, Belgium, Ordina Editions for International Union for the Scientific Study of Population, 1975); "Handbook of population and housing census methods; part 4, section 4: survey of population and housing census experience, 1955-1964" (ST/STAT/Ser.F/16/Add.4).

[9] See, for example, Jorge Balan, Harley L. Browning and Elizabeth Jelin, *Men in a Developing Society: Geographic and Social Mobility in Monterrey, Mexico*, Latin American Monograph Series, No. 30 (Austin, Texas, University of Texas Press, 1973); John C. Caldwell, *African Rural-Urban Migration: The Movement to Ghana's Towns* (Canberra, Australian National University Press, 1969); Sidney Goldstein, Visid Prachuabmoh and Alice Goldstein, *Urban-Rural Migration Differentials in Thailand*, Institute of Population Studies Research Report, No. 12 (Bangkok, Chulalongkorn University, 1974); John J. Macisco, Jr., *Migrants to Metropolitan Lima: A Case Study*, CELADE Series A, No. 133 (Santiago, Chile, 1975); and Alden Speare, Jr., "The determinants of migration to a major city in a developing country: Taichung, Taiwan", in Academia Sinica, *Essays on the Population of Taiwan* (Taipei, 1973), pp. 167–188 (data refer to Taiwan Province).

[10] Goldstein, loc. cit.

[11] Sidney Goldstein, "The extent of repeated migration: an analysis based on the Danish Population Register", *Journal of the American Statistical Association*, vol. 59, No. 308 (December 1964), pp. 1121–1132; Peter A. Morrison, "Implications of migration histories for model design", report P-4342, Santa Monica, California, The Rand Corporation, 1970; Larry Long and Kristin A. Hansen, "Interdivisional primary, return, and repeat migration", *Public Data Use*, vol. 5 (1977), pp. 3–10; and Ann R. Miller, "Interstate migrants in the United States: Some social and economic differences by type of move", *Demography*, vol. 14, No. 1 (February 1977), pp. 1–17.

between two places.[12] Lastly, some persons may move only once, directly to their ultimate destination; but often they are only a minority of all migrants.

All too often, when migration data are collected and analyzed, particularly in censuses, concepts employed for use in developed market economies have been employed uncritically in less developed countries. The restriction, in most instances, to defining migration only as permanent moves, involving the crossing of boundaries which generally encompass large areal units such as provinces, ensures the exclusion of most short-distance moves and those which are temporary. Studies that record short-term movements show that the extent of circulation or return migration is far greater than revealed by censuses. Such mobility often constitutes a very high percentage of all moves and has significant implications for the mover, for the places of origin and destination, and for development in general.[13]

Given the high rates of urban growth that characterize most less developed countries and the substantial contribution of migration to that growth, increasing importance will attach to the extent to which "urbanizing villagers"[14] have no intention of staying in the cities and the extent to which many of those who do intend to stay are driven to return to the villages by the shortage of urban jobs. Such a situation could mean that the movement into and out of cities is substantially greater than the available data from censuses and surveys indicate. Furthermore, high turnover rates could also mean that self-correcting factors operate in the migration process, so that the net results are not as injurious either to the cities or to the individual migrants who settle in them. Full testing of such a thesis requires information both on the separate in- and out-movements to cities (both short- and long-term) and on the characteristics of the migrants, so that the selective processes of in-movement, out-movement and return movement can be more fully assessed.

Not all movement from urban to rural locations necessarily represents the exodus from cities of less successful migrants or of maladjusted urban dwellers. Some research[15] has shown that part of this movement consists of government officials and other white-collar workers transferred to rural locations; some may also consist of persons who are returning to rural locations as originally planned, after achieving whatever goals motivated their initial move to the cities. Who these migrants from urban to rural locations are and what their impact is on rural places merits fuller identification and close monitoring.

Population movement may very well constitute much more of an adjustment mechanism than has been posited for it heretofore. The many different forms of movement, ranging from permanent migration at one extreme to daily commuting at the other, allow a vast number of persons to take advantage of the economic and social opportunities provided by both urban and rural places. At the same time, the growing network of urban locations provides an increasing set of destination alternatives for both rural and urban residents. In a number of less developed countries, the sizeable amount of return and repeat migration between urban locations points to the significance that such interchanges have already had and will likely have in the future.

A. Sources and limitations of data

Undertaking research on migration and other forms of population movement in less developed countries as the basis for both policy formulation and programme evaluation presents major challenges. A number of countries lack information of any type. In 1975 and in a 1976 follow-up review,[16] the United Nations compiled information obtained from the national statistical offices of 213 countries, on national practices in the definition, collection, compilation and uses of internal migration statistics. That survey determined that at least 121 countries had investigated the phenomenon of internal migration to some extent. However, because a substantial number of countries provided no information, it was not possible to know how many countries had not investigated the phenomenon at all. Of the 121 countries, 85 indicated that they relied upon field inquiries only as a basis of their data sources on internal migration; an additional 12 relied exclusively on population registers (10 of these countries were in Europe); and 24 used both field inquiries and registers. In Africa, South America, Asia and Oceania, 60 of the 70 countries that reported indicated exclusive reliance upon field inquiries for internal migration data. In contrast, just half of the 50 countries in Northern America and Europe that reported used only a field inquiry.

Among the countries that have collected some information on population movement through censuses, registration systems or special surveys, considerable variation exists in the type and quality of data available. Detailed assessment of the strengths and limitations of censuses, registers and surveys as sources of data on population movement are undertaken in other reports.[17] Here, the evaluation of these alternative

[12] Murray Chapman and R. Mansell Prothero, "Circulation between home places and towns: a village approach to urbanization", paper presented at the Association for Social Anthropology in Oceania Working Session on Urbanization in the Pacific, Monterey, California, March 1977.

[13] Graeme Hugo, *Population Mobility in West Java* (Yogyakarta, Indonesia, Gadjah Mada University Press, 1978); and Murray Chapman, "On the cross-cultural study of circulation", *International Migration Review*, vol. 12, No. 4 (Winter 1978), pp. 559–569.

[14] Michael Lipton, *Why Poor People Stay Poor: Urban Bias in World Development* (Cambridge, Massachusetts, Harvard University Press, 1977).

[15] Sidney Goldstein, Pichit Pitaktepsombati and Alice Goldstein, "Migration to urban places in Thailand: interrelations among origin, recency, frequency, and motivations", Institute of Population Studies Paper, No. 21, Bangkok, Chulalongkorn University, 1977.

[16] *Statistics of Internal Migration: A Technical Report* (United Nations publication, Sales No. E.78.XVII.13).

[17] Kalman Tekse, "The measurement of rural-urban migration", in Sidney Goldstein and David F. Sly, eds., *The Measurement of*

sources can therefore be largely restricted to the special data requirements considered necessary for identification, formulation and evaluation of spatial population redistribution programmes.

Population registers are often considered to be superior sources of migration data because they provide information, theoretically at least, on every move in the country on a continuous basis.[18] Registers also allow analysis by a variety of geographical, political or administrative units; and often include data on a range of migrant characteristics. Their coverage of both in-movers and out-movers gives them particular advantages over surveys conducted in similar areas; and the quality of data collected on "temporary migration", while not perfect, may also be superior to those provided by censuses and surveys. Registers do have some disadvantages, however. To the extent that the registration system is often instituted for administrative rather than research purposes and is not directed towards migrants, it may not provide the full range of characteristics required for assessing migration and may not provide any information on reasons for movement. Perhaps most serious, the institution and maintenance of quality registers requires a high degree both of administrative sophistication and of cooperation by the population; yet, the means and the motives for achieving these features are often lacking in less developed areas. For example, a recent study of migrants to Bangkok found that the majority did not register their move because, among other reasons, they did not intend to become permanent residents of the metropolis.[19] Overall, it appears unlikely, therefore, that population registers will be widely instituted in less developed countries in the foreseeable future. For present purposes, then, attention to data sources can largely be restricted to censuses and surveys.[20]

Censuses and sample surveys differ in their advantages and limitations for purposes of providing data on population movement. As a recent United Nations evaluation summarizes it:

> "In any given situation, the trade-offs between geographical and subject-matter detail required, anticipated sampling and non-sampling errors and anticipated costs have to be assessed carefully. For example, the census may more efficiently provide the small-area statistics that are needed but it is not suitable as a vehicle for inquiring into reasons for migration or similar topics that require time-consuming questioning. Household sample surveys, particularly those designed for the investigation of migration alone or in conjunction with only a few other topics, offer a more suitable vehicle for questioning in detail and are also useful for the collection of migration histories. Because censuses are usually held decennially or, at the most quinquennially, they can provide information only infrequently. Household sample surveys repeated at frequent intervals can provide more current information. . . .
>
> "One of the drawbacks of the use of a field inquiry of either type is that at best it does not permit assessment of the flow of migration on a continuous basis because in-migration coverage is restricted solely to net residual in-migrants in the population at the time of the inquiry and information on out-migrants collected at the place of previous residence is dependent on proxy response, which is often inadequate for household members who have left the area and even more so when an entire household has left. Field inquiries also suffer from memory lapse and other types of response errors associated with any retrospective inquiry in a 'flow' phenomenon."[21]

Census data on internal migration are obtained directly by including a question on migration and indirectly through estimation procedures that use data obtained for other purposes. Usual direct questions on internal migration have to do with: place of birth; duration of residence in the place of enumeration; place of residence on a fixed date before the census; and place of last residence. All of these data have been included as "priority" items in the United Nations recommendations for the 1980 censuses; in the absence of majority regional support the United Nations recommendations do not give priority to place of work, journey to work and reason for migration.[22] The volume of migration observed in any given country is obviously affected by the nature of the questions asked and by what the respondent considers to be the usual place of residence. Since the older a person is, the more opportunity there has been to move in the interval between birth and the time of the census, tabulations of place of birth will generally identify more persons as migrants, in the absence of a significant return movement to the place of origin, than will a question referring to a place of residence at a fixed prior date. The 1970 census in Thailand, for example, identified 14 per cent of the population as migrants when migration was defined as residence in a province different from province of birth; only 7 per cent were identified as migrants when the definition was based on change in province of residence within the five years preceding the census.[23]

Another basic consideration relates to the areal unit used. Place of birth or origin of the move at a fixed date may be recorded as village, town, district or

Urbanization and Projection of Urban Population, pp. 143–210; *Manual VI. Methods of Measuring Internal Migration* (United Nations publication, Sales No. E.78.XIII.3); and *Statistics of Internal Migration: A Technical Report*.

[18] K. Tekse, loc. cit., pp. 149–151.

[19] Aphichat Chamratrithirong, "Recent migrants in Bangkok metropolis: a follow-up study of migrants' adjustment, assimilation and integration", 1979 (mimeographed).

[20] *Methodology and Evaluation of Population Registers and Similar Systems* (United Nations publication, Sales No. E.69.XVII.15).

[21] *Statistics of Internal Migration: A Technical Report*, p. 14.

[22] "Draft principles and recommendations for population and housing censuses; part II. Topics and tabulations for population censuses" (E/CN.3/515/Add.2), pp. 4–10.

[23] Fred Arnold and Supani Boonpratuang, *1970 Population and Housing Census: Migration*, Subject Report, No. 2 (Bangkok, Thailand, National Statistical Office, 1976).

province. Other things being equal, the smaller the areal units used, the larger will be the volume of migration recorded because the opportunity to cross a boundary usually increases as the size of the areal unit decreases. If movement is measured in terms of village of residence, for example, more movement will generally be recorded than if the question were asked in terms of province. Many persons might have moved from village to village within a province; and, yet, in response to the census question, correctly report that they were living in the same province as before and, as a result, be classified as non-migrants. According to the census of India in 1961, for example, when state of birth was used as the unit, only 3.3 per cent of all persons were counted as migrants; when place of enumeration was used instead, the level of migration increased almost tenfold, to 30.7 per cent.[24] When localities (rural and urban) are used as units of analysis in ascertaining the volume of recent migration in Thailand, the level of migration rises to 12 per cent instead of the 7 per cent noted for interprovincial moves.[25] Both time and space clearly are crucial considerations affecting the volume of migration.

Permanence often is cited as a major criterion in determining whether migration has occurred. Yet, the basis for determining permanence remains among the weakest elements in defining migration. In part, this problem reflects the omission of any questions on plans or "intent" in censuses; in part, it reflects the recognition that mobile persons may not be certain about the permanence of a move or may eventually change their plans. For this reason, some test of length of residence in a location or separation from a prior residence—whether one year, five years or since birth—is often used as a proxy for "permanence". This lack of precision also helps explain why so much more variation exists among different data sets for this aspect of population movement than for most other aspects of mobility.

The question of permanence is not merely of academic interest. Whether a person will be resident in a given location for a short or a long time has serious implications for the ties of that person to the community of origin and destination, for the nature of the interaction with kin networks, for the extent and type of services that need to be provided the mobile person at destination and for the role of the mover in the social and economic development of the home community. Because the question of permanence takes on special importance in considering the distinction between migration and other forms of movement, including commuting, and because it has such relevance for policy considerations, the topic receives considerable attention in the succeeding sections of this paper.

Closely related to the concern with permanence of move is the extent of repeat movement. Possibly excluding the population register and, to a lesser extent, the duration-of-residence question ("How long have you been living in this place?"), most sources of data on migration are likely to underenumerate the total volume of migration during any given period because the nature of the question does not provide information on moves made in the interval between the time references used. This shortcoming particularly affects the place-of-birth question, since the interval is long for all but the youngest persons.

Because migration is associated with a wide range of social and economic conditions and itself can be a stimulus for further change in the individual migrants and in their places of settlement, the intervening moves and especially return moves may be important for the insights they provide both on the effect of environmental conditions on migration and on the effect of the migrants on the communities where they live. To assume that a person who has returned to his place of origin is like those who never left and that the move had no effect either on him or on the place seems an oversimplification. To the extent that all measures of net migration and many census type of questions fail to identify repeat migrants as such, the overall assessment of the significance of migration for population redistribution, of its functional value for relocating job seekers in relation to job opportunities and of its potential as an agent of social change is hampered.

The problems confronted by migration analysts are even more severe than those implied by this very brief review of the nature of data sources. Too often the direct sources of data do not exist, so that insights on migration can be gained only through reliance upon indirect procedures. As a result, only net migration estimates can be computed; migration streams cannot be identified, nor can the data yield information on many key characteristics of the migrant and non-migrant population. This deficiency is particularly serious because interest in migration has focused very heavily on the ways in which migration operates selectively at place of origin and results in differentials between migrants and non-migrants at place of destination. Attention to differentials reflects the general concern with the impact of migration on the social, economic and demographic structures of the places of origin and destination, on the development process in general and on the migrants' personal adjustment.

Particularly when migration represents a response to policies designed to achieve certain redistribution goals that involve not only given numbers of migrants but persons with given characteristics, attention to differentials must be given high priority. Yet, very often the evaluation of differentials is seriously impeded by the cross-sectional nature of the information available. Whether based on a census, a survey or a registration system, most data on characteristics—of both migrants and non-migrants—refer to those pertaining at the time of the record creation. As a result, assessing the pre-move characteristics is not feasible for those characteristics which can and, indeed, are

[24] Ashish Bose, "Basic data needed for the study of migration: a case study of the Indian census", in S. Goldstein and D. F. Sly, eds., *Basic Data Needed for the Study of Urbanization*, pp. 78–79.

[25] F. Arnold and S. Boonpratuang, op. cit.

likely to change in association with a move: whether an unemployed person became employed; whether an unskilled laborer took up more skilled employment; or whether a single person married. Beyond this level, questions arise as to what changes occurred within a specified time after the move; the ways in which these changes varied for different migration streams and for different types of movement and what impact the changes had on origin and destination and on the migrant. It is clear that these and many other questions require quite different kinds of inquiries and/or record-keeping than the simple assessment allowed by the census type of data. Together with concern for the adequacy of definitions of migrants, based on temporal and spatial dimensions, the availability of information necessary for assessing differentials in space and over time takes high priority in any inventory of data deficiencies relevant to research on redistribution.

The data deficiencies on population movement are compounded when interest focuses, as it does in so much of policy formation and evaluation, on movement specific to rural or urban places of origin and destination. A number of countries fail to tabulate migration data in terms of rural and urban places of residence. In some instances, this situation has reflected a lack of interest in rural-urban differentials; in some, it derives from the absence of a clear rural-urban delineation in the official statistics. In general, however, it is possible to identify the urban-rural residence of the migrant population at the time of the census if the census employs a rural/urban classification system. More difficult is classification of the rural-urban places of origin of the migrants and measurement of the various streams of movement between rural and urban places: rural-rural; rural-urban; urban-rural; and urban-urban.

Obtaining information on the rural/urban character of the place of origin presents particular difficulties. Respondents are often unable to provide exact information on whether their place of origin was rural or urban, especially since the character of many places has changed over time; and what may have been rural at the time of out-migration may be urban at the time of the most recent census. Use of current status therefore does not serve the purpose of an assessment of rural-urban migration; and reliance upon the respondents may lead to considerable response error, particularly where urban boundary changes have been frequent.

Given the several problems in measuring population movement generally and rural-urban movement in particular, it is understandable that researchers have had comparatively poor data. It explains why so much of the knowledge of the role of population redistribution and urban and rural growth relies heavily upon very indirect information—either estimates of net migration or comparative growth rates of urban and rural places. In attempts to rectify this situation, several countries, including, for example, the Philippines[26] and Thailand,[27] have undertaken national surveys in which considerable attention has been given to migration. Yet to date, one must continue to rely very heavily upon the much more limited information available from official censuses to gain insights into the underlying patterns of rural-urban migration and urbanization. Overall, these data have not permitted in-depth evaluation of the character of the movement, of the causes and consequences either for the movers or for the places of origin and destination or of the relationship between migration and social and economic development.

The limitations of the information available for migration research become even more serious as efforts are instituted to control population distribution through channelling movement in given directions, through altering the composition of migration streams, through changing the mix between permanent and temporary movement or through stimulating urban and/or rural development. Any realistic formulation or evaluation of such efforts clearly requires a solid set of data on how many persons move, who they are, where they move and why they move. Furthermore, these data must also be in such a form with respect to time interval, spatial units and type of movement so as to allow their use in relation to the policy efforts. Data that define movement in terms of crossing provincial boundaries are of little value for evaluating the impact of efforts at industrial development in city "Y" or a rural resettlement programme in province "Z". Even five-year or one-year migration information may be of only limited value if the spatial unit is not meaningful in relation to the policy effort; or if it is not feasible to distinguish permanent from temporary movers, to assess the role of commuting as a response to industrial development or to measure changes in the social and economic status of the movers. In order for policy evaluation efforts to be most useful, they must also include assessment of information on the characteristics of programme participants and non-participants the programme inputs; and the social, economic and political characteristics of the places where programmes are implemented, especially contrasting those locations where programmes succeed and where they fail.

To a large extent, the types of data collected on spatial population redistribution may be determined by the uses for which the information is intended. According to the United Nations survey in 1975 and 1976, to which 100 countries responded, "the most frequent use of internal migration data has been for the study of movement of population from rural to urban areas and/or from smaller to larger urban areas. Eighty-nine

[26] Juan del Rosario, Maria Lourdes and Yun Kim, "Migration differentials by migration types in the Philippines: a study of migration typology and differentials, 1970", paper presented at the International Union for the Scientific Study of Population General Conference, Mexico City, August 1977.

[27] Visid Prachuabmoh and others, *The Methodology of the Longitudinal Study of Social, Economic, and Demographic Change*, Institute of Population Studies Research Report, No. 6 (Bangkok, Thailand, Chulalongkorn University, 1971).

countries reported using the data for this purpose".[28] Next most frequently, the data were used for the planning of community recreation and social services and for the study of movements of population from economically depressed to prosperous areas; just half of the countries reported using the data for these purposes. Three sets of reasons accounted for the third-ranked uses of migration: preparation of subnational population estimates and/or projections; development planning and policy making; and the study of fertility patterns of migrants. A number of countries reported using the data for more than one purpose; thus, those categories are not mutually exclusive. More important, although only 25 per cent reported explicitly that the data were used for development planning and policy making, the information may indirectly be used for the basis of policy decisions. The titles of the various categories suggest that this may well be the case.

Given the varied uses to which existing data have been put and the still wider range of potential uses, special attention should focus on the appropriateness of the concepts of migration for such uses. Yet no set of international guide-lines have been developed for countries to follow. In their absence, the United Nations suggests that "national authorities should bear in mind the utility, in both the collection of the data and their publication, of clear and unambiguous specification of the migration-defining area, the migration interval and, if relevant, the time period of presence or absence used in determining residence".[29] At the same time, the report points out, countries should be concerned with refining their definitions of migration to include cyclical, short-term and short-distance movement, including movement from one neighbourhood to another within a locality. Such information, it is suggested, may be extremely useful for community planning for utilities, transportation, home and business construction, recreation and local health services, especially in large urban localities.

Effective research on population redistribution must thus include a basic concern with the relevance of concepts and data to policy questions, including problem identification, goal setting and monitoring, and evaluation. Several areas of research must thereby receive concurrent attention. Concepts of population movement must be refined to allow identification of all forms of movement that affect urban and rural places, either by contributing to problems associated with change in size and composition or by helping these locations to cope with these problems. The types of data needed to measure these concepts must be determined and the best and most appropriate sources of such data identified. The residential categories (spatial units) for which such information needs to be made available should be carefully reviewed. Lastly, research must be designed to assess the success of previous efforts to control population movement and urban growth, and to identify the underlying factors that have accounted for the success or failure of specific policy designs.

Taken together, the general deficiencies that often characterize migration data and those which arise in specific efforts to assess the need for or the success of policy efforts call for a concerted effort to reassess research perspectives and priorities and to improve data collection systems.

B. Research priorities

Because of the limited knowledge of population movement in less developed countries and of the relation of migration to development processes and because of the inadequacies of that knowledge for formulating and evaluating policies on population redistribution, a series of research needs emerge. Some of these needs relate to the development of concepts, others to data collection and tabulation; all require high priority on the agendas of both the government agencies responsible for data collection and preparation and the research scholars engaged in analysis of these materials. These research needs, in turn, give rise to particular data needs. The discussion deals first with the research priorities, followed by attention to the data needs generated by these priorities.

(1) As a result of both the fuller exploration of census data and especially the new insights gained from specialized in-depth surveys of population movement, there has begun to be recognition that the process of population movement is very different from that usually portrayed by the traditional analysis of limited census data: (*a*) urban and rural populations are less stable than usually assumed; (*b*) movement takes on multiple forms and is not limited to permanent migration; (*c*) motives are not just economic but often have a strong social component; (*d*) links between rural and urban places are often stronger than assumed; and (*e*) the nature and degree of adjustment and assimilation are often better than hypothesized. All of these insights have particular relevance for policies designed to affect population movement and urban and rural development. Therefore, research efforts should encompass the broadest possible conception of population movement in order to allow identification of the different types of movement, ranging from permanent migration at one extreme to daily commuting at the other, with provision for intervening categories, such as circular migration, onward or repeat movement and seasonal movement. Conceptual clarification and careful attention to these various categories of movement are essential for both their theoretical and their policy relevance.

(2) The role of migration in the total social and economic system can vary, depending upon the type of movement; indeed, the type of movement itself may vary as conditions change with respect to the place of wage-labour in the system, the efforts at agrarian reform, the demographic situation and the provision of collective services. It therefore becomes essential to

[28] *Statistics of Internal Migration: A Technical Report*, p. 3.
[29] Ibid., p. 21.

ascertain, in relation to the total system, not only who moves and from where, but also what form the movement takes, why this form was chosen and what impact different forms of movement have on the places of origin and destination and, inevitably, on the movers. In assessing the relationship between the total system and movement, the researcher needs to recognize that cause and effect can operate in both directions: the system can affect types and levels of movement, which, in turn, can have a significant impact on the system. Research must be designed to assess this two-way interaction process.

(3) Research is also needed on how reliance upon various forms of movement has changed in relation to changing social, economic and demographic conditions and in response to development policies and programmes. Such changes could drastically affect the impact of movement on both the urban and the rural locations. For example, any significant change from reliance upon permanent migration to circular migration or commuting could lead to significant alterations in the demand for housing and education in urban places, the nature of family relationships, the contribution of movement to rural development through remittances and wages, the levels of fertility in rural and urban locations, the levels of household consumption and the demand for transportation services, among many other variables.

(4) Research should also focus on the comparative costs and benefits (economic, social and psychological) of permanent migration compared with circular migration and commuting, in order to ascertain whether considerable economies would be achieved through use of one type of movement or another. On the basis of such research, Governments might well be advised to encourage one type of movement over another as a way of coping both with the problems of urbanization and rural development and with the problems of adjustment of individual migrants.

(5) Greater attention needs to be given to the movers' self-perceptions as temporary or permanent migrants. The nature of such identification could have a substantial impact on individual economic and social performance at the place of destination and on the contacts maintained with place of origin. It could help to explain migrant reactions to given redistribution policies and to enhance the likelihood that proposed policies will be more effective. Related to this concern, it is essential to assess the links established through remittances and through visits and return migration; each of these ties could have a significant impact on rural development and on the pattern of collective services and both could, in turn, affect the total development process of given societies.

(6) Any research on return migration should determine not only its volume but the extent to which return movement serves to relieve pressures at place of initial destination and the ways in which return migrants act as agents of social change. The latter concern relates particularly to migrants returning to rural areas from urban places. Special attention needs to be given to the fertility levels of such return migrants and whether, in the long run, the fertility patterns that they may have adopted in urban places will become "models" for the population in the rural places of origin.

(7) In addition to focusing on types of movement, research should also attempt to develop a typology of migrants as a basis for assessing why persons with similar characteristics do or do not migrate and why those who move choose their destination and the particular area of residence within the place of destination. Such research should be related to surveys that attempt to predict who will move. Knowing the combination of social, economic and psychological characteristics that help to identify migration-prone persons and that influence their entire decision-making process should facilitate formulation of policies and programmes geared either to encourage or to inhibit movement.

(8) To date, most attention to the areal aspects of migration has focused on destinations of movers. If origin is considered at all, it is usually in terms of aggregate categories, such as provinces or rural/urban places. Relatively few studies have used disaggregated village level or small-town data. Yet, if process of redistribution is to be fully understood, regardless of whether it involves rural-rural, rural-urban, urban-urban or urban-rural movement, and regardless of type of movement, much more attention needs to be given to the characteristics of the sending as well as the receiving areas. In particular, this effort requires research on the types of places that are characterized by out-migration, the conditions under which such places are likely to "send" out migrants; and the ways in which these types vary with respect to who moves out, the form of movement involved and the impact on the place itself.

(9) There is a need to recognize more fully than in the past that rural-rural migration is as crucial a dynamic of change as rural-urban movement. In the concern with problems of urban growth, the impression has often been given that rural-urban movement constitutes the major migration stream in less developed countries. Yet, in many countries, rural-rural movement exceeds the transfer to urban places and may have as important, if not an even greater, impact on rural development. Increasingly, rural-rural movement has been encouraged by resettlement schemes, which are designed as a major mechanism both for reducing the rate of movement into cities and for relieving the pressure on existing rural settlements. Particularly because rural-rural movement often involves only short distances within provinces or states, it is not identified as migration. This particular deficiency is exacerbated by the fact that a high percentage of rural-rural movement may often be temporary, related to seasonal needs for labour. For all these reasons, it becomes absolutely essential that research on population movement give adequate attention to the rural-rural streams.

(10) Of parallel importance is urban-urban movement, especially in those regions where a high percentage of the population already resides in urban places and where small urban places (in contrast to the primate city) have begun to occupy an important role in the urban hierarchy. The extent to which such smaller places come to constitute stepping-stones in the eventual movement to the large city needs to be ascertained, as well as the degree to which persons leaving the large city turn to smaller urban places as alternative locations for finding jobs and adequate housing. Research must focus not only on the volume of such movement but on the characteristics of the movers and the considerations underlying their choice of destination. The insights gained should be particularly relevant to policy formulation related to the possible creation of growth centres as alternative destinations to the primate city.

(11) Growing attention must also be given to the role of urban-rural movement as a potential stimulus for social change and modernization, for its contribution to relieving pressures on cities and for its role in coping with the adjustment problems faced by both natives and in-migrants. The question of whether out-migrants from urban places constitute the more "successful" persons or represent the failures is particularly relevant. Resulting information might provide insights on the success of migration as a redistribution mechanism and on the impact of selective return migration on the extent of "overurbanization" in particular countries.

(12) It is frequently assumed that rural-urban migrants have considerable difficulty in adjusting to life in the city, both because of the sharp differences between the rural and urban way of living and because of the difficulties encountered in finding housing and jobs. These concerns argue for careful assessment of the absorption and assimilation processes as they relate to internal migration. In particular, evaluation is needed of the ways in which migrants adjust to life in their place of destination, whether "maladjustment" contributes to high rates of return and onward movement, and whether the adjustment process of permanent migrants differs significantly from that of persons who plan to stay only temporarily in their place of destination. Such an assessment must go beyond the economic aspects of migration to give attention to the social, political and psychological components of the absorption and assimilation process. This point is particularly crucial if a full assessment of "urbanism" as a way of life is to be undertaken rather than an evaluation of urbanization exclusively as a demographic process.

(13) Just as fertility research focuses disproportionally on the female population, research conducted to date on migration has given disproportional attention to male migrants. In part, this focus reflects the importance of economic variables in migration and the consequent belief that decisions to move are largely made on the basis of the economic activities of male members of households; in part, it also reflects the fact that many migration surveys focus on the household as the sampling unit and data are therefore collected from the head of the household as "chief" decision-maker. Several important efforts have been initiated to correct the existing imbalance in the approaches to migration based predominantly on male migration. The Population Council has initiated efforts in this direction by sponsoring research intended to develop a conceptual and empirically testable framework for analyzing the determinants of autonomous female migration.[30] The East-West Population Institute has organized a seminar on "Women in the Cities", which includes attention to female migration.

Yet, as a recent research and policy review of female migration in Thailand points out: "It is clear that migration studies have not yet begun to reach their full potential for analyzing motivations for female migration, adjustment problems, migrant needs, information flows, and a complex decision making process."[31] In the analysis of census data and the exploitation of national and community surveys, attention must be given to female migrants and non-migrants on the full range of questions related to population movement. The impact of rural development on employment opportunities for women, the flow of better information about opportunities in cities, the expansion of educational opportunities and changes in child labour employment are all relevant; and assessment of their impact on movement and non-movement of women could contribute substantially to the development of more effective general redistribution policies as well as those policies specific to women.

(14) Priority also needs to be given to research on the interrelationships between population movement and family structure, as well as between population movement and fertility.[32] Among the questions to be studied are:

(*a*) Whether the type of family structure has an impact on the volume and type of out-movement and on which family members move;

(*b*) Whether higher fertility leads to more out-migration;

(*c*) Whether the type of movement affects fertility levels within the family unit;

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[30] Veena Thadani and Michael Todaro, "Toward a policy of female migration in developing countries", Center for Policy Studies working paper, New York, The Population Council, 1978.

[31] Fred Arnold and Suwanlee Piampiti, "Research and policy review of female migration in Thailand", paper prepared for the Women in Cities Working Group, Honolulu, Hawaii, East-West Population Institute, 1979.

[32] Oded Stark, "Desired fertility and rural-to-urban migration in LDC's: the positive connection", Paper No. 6/78, Tel Aviv, Israel, Tel Aviv University, David Horowitz Institute for the Research of Developing Countries, 1978; Alvan Zarate and Alicia Unger de Zarate, "On the reconciliation of research findings of migrant-non-migrant fertility differentials in urban areas", *International Migration Review*, vol. 9, No. 2 (Summer 1975), pp. 115–156; Sidney Goldstein and Penporn Tirasawat, *The Fertility of Migrants to Urban Places in Thailand*, Papers of the East-West Population Institute, No. 43 (Honolulu, Hawaii, East-West Center, 1977).

(*d*) Whether resettlement leads to changes in fertility levels as the result of changes between population and resources;

(*e*) Whether the fertility of migrants differs at points of origin and destination, and the extent to which migrant fertility contributes to overall population growth;

(*f*) What the relative contributions are of migration and fertility to the expanding urban labour force;

(*g*) Whether high fertility is maintained in rural areas because migration is seen as a way to cope with population pressures and may in fact be viewed as a positive mechanism through which those remaining in rural areas (especially parents and siblings) may benefit through remittances from the out-migration of another family member;

(*h*) Whether policies directed at controlling migration need concurrently to include efforts to control fertility.

(15) Available evidence suggests that a considerable part of migration is economically motivated and intended to cope with the immediate problems created by pressures of population on resources and the resulting limited opportunities for achieving desired levels of living.[33] Little research is available, however, on the extent to which the decision to move and the decision on where to locate takes account of the future needs of children in the family. Such considerations are particularly relevant to rural resettlement programmes; unless long-range planning is incorporated into them, resources may prove inadequate just as soon as the children of migrants become old enough to enter the labour force; the entire cycle of pressures for out-migration may recur in the absence of adequate facilities and resources to absorb the younger generation.

(16) Although a considerable part of the research that attempts to assess the reasons for population movement and the impact of movement on places of origin and destination takes account of economic variables; and, in so doing, also gives attention to environmental factors, specific research is needed on the interrelations between population movement and environmental conditions. There are questions concerning: (*a*) the extent to which changing ecological conditions in rural areas, such as desertification, irrigation projects and deforestation, create pressures for out-migration; (*b*) the extent to which the effort to develop rural areas through location of industry, highway construction, land reform and the "green revolution" affects settlement patterns and opportunities for making a livelihood in rural locations, thereby affecting rates and selectivity of out-migration; and (*c*) whether it is possible to assess the ways in which movement into cities contributes to the various forms of pollution characterizing many urban locations.

(17) Major attention needs to be given to: (*a*) assessing policies designed to control population movement; (*b*) identification of the unanticipated consequences of policies which are being considered for adoption; and (*c*) evaluation of all demonstration projects and other programmes designed to affect population movement. Efforts at evaluation should include the impact of both direct and indirect policies, successful and unsuccessful. Such research needs to focus on all stages of policy development, from the initial exploration of the topic to the actual efforts at implementation. Moreover, the assessment should include attention both to the policy-makers and to the potential and actual beneficiaries of the policy, including individuals and communities as entities. The need for research on redistribution policies was recognized by the World Population Conference. Its Plan of Action recommended that studies be undertaken of the experience of countries that have major programmes of internal migration in order that guide-lines could be developed to help policy-makers already engaged in or interested in undertaking similar programmes.[34]

(18) Specific projects should be designed which are experimental in character, either projective or *ex post facto*, to test more adequately the impact of particular programmes and policies on population movement. By comparing local areas with and without government programmes and by undertaking studies both before and after the programmes are initiated, more insights could be gained into the extent to which government programmes do, in fact, affect population movement.

Several examples of ongoing or possible projects can illustrate the value of such research:

(*a*) In an ongoing demonstration project in Thailand,[35] village residents are being informed about job opportunities in local towns; the extent to which they take advantage of this information in making a decision to move will be assessed longitudinally. Concurrently, efforts are made to monitor the extent of out-migration in comparable villages where no such information is being provided. The results of the research should provide important insights on the ways in which programmes on job opportunities can influence the volume and direction, and even the character of population movement;

(*b*) In a number of countries, government policies attempt to achieve urban decentralization by subsidizing new industries to locate outside the primate city or by encouraging existing industrial plants to relocate away from the metropolitan centre. Comparative assessment then becomes possible of those plants which do relocate and those which do not; particular attention can be given to the extent to which the employees of the new or the relocated plants change residence or otherwise alter their movement patterns as a result of plant relocation;

[33] S. E. Findley, op. cit., pp. 9–14.

[34] *Report of the United Nations World Population Conference, 1974, Bucharest, 19–30 August 1974* (United Nations publication, Sales No. E.75.XIII.3), p. 20.

[35] R. Paul Lightfoot and Theodore D. Fuller, "Migration from rural Roi-Et to Bangkok and other cities: a proposal for migration management", January 1979 (mimeographed).

(c) In villages that are affected by efforts of land reform and/or modernization of agricultural technology, the impact of the changes on out-movement can be monitored by controlled comparisons with villages which are not affected by similar developments. All such efforts will require appropriate data to allow full assessment of the impact of the experimental programmes.

(19) To a large extent, interest in population movement is closely allied with concerns with the rates of growth of urban populations and with efforts to control such growth both through channelling population to smaller locations and alternate growth centres and through retaining potential migrants in rural locations or resettling them in other rural areas. As a result, all of the topics identified as important for research on population movement need to be pursued with respect to the ways in which they differentially affect locations which vary in size, function and type. The problems and solutions associated with large cities are obviously different from those characterizing smaller urban places and rural areas. Every effort must be made to collect information in terms of individual localities, so that the ways in which population movement and movers differ by size of place, function and type can be fully understood. This effort is absolutely essential if the resulting information is to be used as the basis for policy evaluation and formulation.

(20) In pursuing these research priorities, recognition must be given to the values of comparative research among countries of Asia, Africa and Latin America, as well as within major regions. Comparisons must also be made of the experience of more developed and less developed countries. There is a need to assess more fully the ways in which types of movement relate to levels and pace of development, capitalization, agrarian reform, urbanization, population growth and composition, and the political situation. More thorough comparisons than have heretofore been undertaken must be made between market economies and centrally planned economies; and fuller attention must be given in comparative research to the effects of size, geographical variables and the relationship between internal and international movement. The value of such comparative research will be enhanced to the degree that it is able to assess patterns of population movement in relation to past or ongoing policy efforts to control movement and/or the rates of urban growth. Useful models for future efforts at comparative research are provided by both the past efforts of the International Union for the Scientific Study of Population (IUSSP) Committee on Urbanization and Population Redistribution to undertake a series of comparative urbanization studies in more developed and less developed countries and the current efforts of the Economic and Social Commission for Asia and the Pacific (ESCAP) to exploit available census data for a number of countries of Asia and to initiate a series of surveys that will allow fuller assessment of the interrelationships among movement, development and policy.

C. Data collection and analysis

A wide range of research is needed on the topic of population redistribution and its relation to policy. The specific data needs are discussed below:

(1) The census will undoubtedly remain an indispensable instrument for measuring internal migration at the national, regional and local levels. Everything possible should therefore be done to encourage the incorporation of direct questions on migration and other forms of population movement into censuses. This recommendation becomes particularly relevant as plans for the 1980 round of censuses proceed. Although the number of questions that can be incorporated into a census is limited, it is important to ensure that the questions that are asked shall focus on the types of movement that are of most pressing concern theoretically, substantively and from a policy perspective. The questions should not be restricted to those traditionally asked in Western societies or even those asked previously in less developed countries. The questions asked must, to the maximum degree possible, allow for analysis of different types of movement, including seasonal migration, return movement and commuting, in order to allow a comprehensive assessment of the relationships between various forms of movement and development efforts. In particular, this requires collecting information on movement between local areas and not just interprovincial migration. It also requires that, as far as feasible, the questions should allow for identification of short-term movement and not just lifetime migration or migration measured over an extensive period, such as five years. Although the resulting data may still have to be aggregated for publication purposes, the availability of the more detailed data on tapes will allow for more intensive analyses as the need arises.

(2) Inclusion in censuses of two or three questions on migration, and possibly a question on journey to work, can only begin to allow meaningful assessments of population movement; moreover, the value of such data are seriously limited by the fact that censuses are generally taken only once every ten or five years. Therefore, efforts must be made to incorporate migration statistics as a part of any existing system of population statistics, especially in national demographic surveys, including the recently initiated Household Capability Surveys[36] and future rounds of the World Fertility Survey.

(3) Given the complexity of population movement and the need to explore all its dimensions, comprehensive evaluation of population movement requires specialized surveys which either focus exclusively on movement or in which attention to movement is a major component. Such surveys should reconstruct residential histories, ascertain the economic and social characteristics of the movers before and after migra-

[36] Susan K. Evinger, "The twentieth session of the United Nations Statistical Commission", *Statistical Reporter*, No. 79-9 (June 1979), p. 244.

tion, as well as the motives leading to a decision to move and the choice of destination; and allow for evaluation of the adjustment process at point of destination. Such a comprehensive approach calls for new surveys on migration that are national in scope. All too frequently, research on population movement has been restricted to individual communities, generally either the major metropolitan centre of a country or, at the other extreme, a village. As a result, the information obtained often cannot be generalized. None the less, because such focused surveys provide a most important basis for intensive assessment of the interrelations between population movement and local conditions, the argument in favour of national surveys should not be interpreted as a call for elimination of the in-depth local community studies. They will continue to provide important insights on the dynamics of migration.

(4) A major drawback of national surveys for assessing migration is their relatively small sample size, which usually results in very few respondents and especially few migrants surveyed in any single location. Even a large sample survey, such as the Current Population Survey in the United States of America, which encompasses about 54,000 households in 614 sampling areas, does not present data for areas smaller than the four major regions of the country (north-east, north central, south and west); migrants are identified within the regions only for broad residential categories, such as metropolitan and non-metropolitan areas, with the former subdivided into central cities and balance of metropolitan area.[37]

Although useful for identifying patterns of movement for the aggregate population, the use of national surveys to assess migration in relation to conditions in particular types of areas or in specific localities is seriously circumscribed. The value of such surveys for assessing policy effectiveness may be correspondingly reduced. For such purposes, consideration should be given to selection of sample survey areas on a non-random basis. Communities in which development projects are in process may, for example, be chosen *ad hoc*, together with comparable communities without projects to serve as a control. Given more general goals of studying communities of out-migration and in-migration, efforts could be made to conduct simultaneous surveys in locations identified in advance through use of census or other data as sending or receiving areas. While losing the advantages that representative national or regional samples provide for attention to non-migrants as well as migrants, more purposive samples may prove more valuable for the assessment of the causes and consequences of population movement: they can provide more migrant cases and allow in-depth attention to the socio-economic characteristics of the areas of in-migration and out-migration. Indeed, a national sample composed of "migration-sensitive areas" might prove especially valuable for gaining insights into the causes and consequences of migration and for monitoring changes in movement patterns, once the basic national patterns of movement have been identified through the census and national sample surveys.

(5) Within the context of the sample survey, innovative efforts become essential to obtain comprehensive data on movement. Several approaches are possible:

(a) *Use of the life-history matrix*. In research on Colombia, Mexico and Thailand,[38] the use of the life-history matrix as a means for obtaining precise retrospective information on mobility behaviour has yielded promising results. Intended as a concisely formulated instrument for ordering, stimulating and cross-checking a person's recall of his or her own life-cycle events, the life-history matrix can encompass information on a range of demographic variables, usually including fertility, mortality and mobility behaviour as well as changes in such characteristics as occupation, marital status, education, and home and land ownership. One of its major advantages is the opportunity to assess mobility in close relation to other life-cycle events and changes in environmental conditions;

(b) *Use of multiplicity or social networks analysis*. In contrast to the conventional household survey, in which only events occurring to household members are studied, the multiplicity survey allows persons who experience vital events and mobility to be counted at more than one housing unit.[39] The additional households eligible to be covered by the multiplicity survey (usually those of specified relatives) are defined by the particular multiplicity counting rules adopted for the survey. The survey ascertains the multiplicity of every enumerated move and thereby obtains the data needed for appropriate weighting, by asking the household respondent supplementary questions to determine the number of different housing units that are eligible to report a mobile individual. Multiplicity rules thus offer a strategy for enhancing the efficiency of a survey by increasing the proportion of housing units for which movement can be enumerated. Although some types of response errors may increase due to the reporting of events by relatives, certain types of coverage bias encountered in a conventional survey—those due to the absence of households in the survey population to report an event (for example, out-migration)—may be reduced through re-

[37] United States of America, Bureau of the Census, *Geographical Mobility: March 1975 to March 1978*, Current Population Reports, Series P-20, No. 331 (Washington, D.C., Government Printing Office, 1978).

[38] See, respectively, Robert B. Corno, "Migrant adjustment in Bogota, Colombia: occupation and health care", unpublished doctoral dissertation, Providence, Rhode Island, Brown University, 1979; Jorge Balan and others, "A computerized approach to processing and analysis of life histories obtained in sample surveys", *Behavioral Science*, vol. 14 (1969), pp. 105–120; and Donald Lauro, *The Demography of a Thai Village* (Canberra, Australian National University, Department of Demography, 1979).

[39] Monroe G. Sirken, "Household surveys with multiplicity", *Journal of the American Statistical Association*, vol. 65 (March 1970), pp. 257–266.

liance on kinship networks. The overall strategy of the multiplicity sample survey is to select from the set of all possible counting rules that particular rule which minimizes the joint effect of sampling and measurement errors. The collection of information on various characteristics of each event covered and of the person concerned, whether that person lives in the household interviewed or elsewhere, allows assessment of the events in relation to the background characteristics of the person to whom the event has occurred. The potential use of multiplicity in research on population movement remains to be fully demonstrated; it is currently being tested on a very small scale in a study in Rhode Island (United States of America) and in a larger study at metropolitan Cebu City, the Philippines, where neighbours rather than relatives are eligible under the counting rules;[40]

(c) *Longitudinal or panel follow-up surveys*. Instead of relying on retrospective data to recreate residential histories, the panel design calls for repeated interviews of the same group of persons in order to record, as close as possible to the timing of the actual event, the relevant information related to that event. Such an approach has been used in fertility research[41] and under ideal conditions should lend itself well to ascertaining the "why" of movement, choice of destination, adjustment and failure in relation to a host of other life-cycle changes, as well as changes in socio-economic structure.[42] Moreover, it would also allow assessment of the conditions under which prior preferences or even decisions on whether to move are changed. There are clear advantages to recording this information close to the time at which the decision and/or event occurs rather than relying on retrospective questions (which are subject to memory failures as well as bias).

Yet, the ideal conditions for a longitudinal study are usually not met; a serious drawback is loss to follow-up, especially due to migration. Such losses can be substantial, as evidenced by the experience of the longitudinal study of social, economic and demographic change in Thailand. Of the 1969 national rural sample, 20 per cent were not covered in the second round of the survey three years later. Of the 1970 urban sample, the loss was greater: 37 per cent were not encompassed in the second round; and of these, two thirds were lost because they had changed residence in the intervening three years.[43]

Where concerted efforts are quite successful in maintaining contact with the original sample (usually easier to achieve in a more developed setting), longitudinal studies may still have considerable promise. For example, the longitudinal study of social and economic factors in migration, using Rhode Island as the study area,[44] provides strong evidence that individuals can be successfully traced. Of the original respondents who were interviewed in 1970, 97 per cent were traceable in 1978. Because the respondents were not contacted directly, however, the low loss to follow-up is probably an understatement. This sample also illustrates a serious disadvantage of longitudinal studies; as the surviving persons do not constitute a cross-section of the 1978 adult population, the value of monitoring their mobility behaviour in order to understand current mobility patterns is reduced. Yet, the use of longitudinal data has the major advantage of allowing more careful assessment of the extent to which attitudes and preferences expressed at one time are subsequently translated into behaviour and the reasons for changes in intentions.

Use of a longitudinal approach need not be restricted to surveys at first intended for this purpose. Although prior planning for such a design has obvious advantages, reinterviews can be conducted in any area in which a census or a survey was conducted at a previous date. By comparing the composition of households in the first and subsequent coverage, persons who were absent during the earlier census or survey can be identified, as can those who moved since then. Such reinterviews should be especially useful in identifying return migrants. With appropriate questions and probing, insights can also be gained into the characteristics of the movers, the nature of the moves made and the causes and consequences of these moves.

Review of the available literature emphasizes that far from adequate experience has yet been gained in the use of innovative approaches to the study of population movement, especially in a less developed setting. The need is great, therefore, for further exploratory research in the utilization of one or more of these alternative ways of gathering data as well as in the development of still more novel approaches to the measurement and evaluation of population movement.

(6) Other data that have not been adequately exploited are those emanating from a dual record system. Such a system collects two independent records of each vital event occurring in a given sample area. It usually does so through a continuous recording of events and repeated surveys of the area. Since the first dual record system was established in 1962 in Pakistan,[45] its value for the reporting of births and deaths

[40] Wilhelm Flieger, "Multiplicity survey in metropolitan Cebu City: preparatory activities", Technical Report, No. 1 (mimeographed).

[41] Larry L. Bumpass and Charles F. Westoff, *The Later Years of Childbearing* (Princeton, New Jersey, Princeton University Press, 1970).

[42] Alden Speare, Jr., Sidney Goldstein and William Frey, *Residential Mobility, Migration, and Metropolitan Change* (Cambridge, Massachusetts, Ballinger Publishing Co., 1975).

[43] Visid Prachuabmoh, John Knodel and Pichit Pitaktepsombati, "The longitudinal study of social, economic, and demographic change in Thailand: the second rounds", Institute of Population Studies Paper, No. 3, Bangkok, Thailand, Chulalongkorn University, 1973.

[44] Alden Speare, Jr., Frances Kobrin and Ward Kingkade, "Longitudinal study of social and economic factors in migration in the United States", final report submitted to the United Nations Educational, Scientific and Cultural Organization, 1978 (mimeographed).

[45] Forrest E. Linder and Joan W. Lingner, *Systems of Demographic Measurement, General Evaluation: The Measurement Problem*,

has been tested in a number of other countries.[46] The value of the system for data on migration lies mainly in the development of the survey records compiled from the repeated household interviews in the test area, because the survey form is generally designed to collect information on the base population to be used for computation of crude and specific rates and for ascertaining accurately the factors accounting for population change. In-movement and out-movement is one such set of factors.[47] In the surveys conducted in Colombia, Kenya and the Philippines, for example, information was variously ascertained for birthplace, date of migration, reason for migration, origin of migration, and/or destination and estimated stay.[48] Data necessary for evaluating the role of population movement in demographic change in the study areas has thus frequently been collected; unfortunately, however, little analytical use has been made of the information.

One evaluation of dual-record migration data has been undertaken by the Philippine Population Laboratory conducted by the Mindanao Center for Population Studies.[49] The assessment suggests that migration, and especially out-migration, is less likely to be detected by the survey system than by the recording system. The survey was also unable to pick up as many moves of short duration or as many multiple moves by the same person as did the recording system. Although a major limitation of this approach is its narrow geographical scope, the migration data do provide insights into the varied types of migration and their patterns for the area and can therefore provide administrators with important knowledge of the dimensions of movement. The collection of similar data in places other than the Philippines and the likelihood that such data will become available in new surveys of population change and estimation argue strongly for more attention to the potential of such data sources for insights on movement in less developed countries.

(7) The value of administrative and other record systems for assessing and monitoring population redistribution must continuously be reviewed. In a number of countries, population registers, tax rolls, social security files, school enrolment statistics and health records have substantial potential as sources of information on the volume, composition and direction of population movement. Their utilization in conjunction with data on changing environmental conditions, creation of new job opportunities and development of new health, educational and other facilities should prove valuable in the assessment of the impact of both direct and indirect policies on population redistribution. Research should fully use the potential opportunities afforded by technological advances associated with remote-sensing devices to assess changes in population distribution and density, housing conditions and environmental changes affecting movement.

(8) All data collection on population movement needs also to assess those segments of the population who do not move. Such analysis will permit fuller understanding of what leads persons to consider moving, what factors eventually induce a move, why so many people do not move at all and what alternative methods of adjustment the non-movers rely upon to cope with the types of problems that often motivate migration. Such information is particularly relevant for policy formation since the substantial growth of the rural population in the less developed regions will produce a growing population reservoir which will contribute to future movement as pressures on resources develop. Migration-control policies will have to be largely directed towards this population if efforts to retain people in rural areas or to channel them to alternative locations are to be successful. Information on non-movement is also relevant for urban-dwellers. As the urban population comes to constitute a growing proportion of the total population, it will provide an increasing reservoir for movement to other urban places and to rural locations.

(9) Paralleling research on fertility, surveys of population movement need to collect data on intentions concerning future mobility. Instruments and questions should be developed and refined that will benefit from those already tested in Knowledge-Ability-Practice (KAP) surveys. Experience to date with efforts to evaluate the extent to which mobility intentions expressed in a survey are translated into action show that the expressed wish to move serves as a strong predictor of eventual movement.[50] Insights gained through such survey questions should prove useful both in projecting migration trends and in gaining additional insights into policy measures that might control population movement.

(10) For many countries, a considerable body of data on population movement already exists in censuses and surveys. The data have not, however, been exploited in the published tabulations. Very often, especially for less developed countries, the published data consist only of one or two tables in which the migration status of the population (however defined) is cross-tabulated by age and sex for the various provinces or states of the country. Often, the destination data are not even cross-tabulated by origin; and it is indeed infrequent that data derived from two migration questions (such as place of birth and place of residence five years preceding the census) are cross-tabulated to

Laboratories for Population Statistics, Scientific Report Series, No. 22 (Chapel Hill, North Carolina, University of North Carolina, 1975).

[46] Eliska Chanlett and Marie D. Fichet, *Systems of Demographic Measurement: The Dual Record System; Vital Event Recording Subsystem*, Laboratories for Population Statistics, Scientific Report Series, No. 27 (Chapel Hill, North Carolina, University of North Carolina, 1976).

[47] Eli S. Marks, William Seltzer and Karol J. Krotki, *Population Growth Estimates: A Handbook* (New York, The Population Council, 1974).

[48] E. Chanlett and M. D. Fichet, op. cit.

[49] Francis C. Madigan and Alejandro N. Herrin, *New Approaches to the Measurement of Vital Rates in Developing Countries*, Laboratory for Population Statistics, Reprint Series, No. 18 (Chapel Hill, North Carolina, University of North Carolina, 1977).

[50] A. Speare, Jr.; F. Kobrin and W. Kingkade, op. cit.

provide some indication of patterns of repeat and return movement to allow a more refined typology of migrants and more sophisticated assessment of movement patterns.[51]

Yet, the availability of these data and their limited use to date, coupled with the likelihood that more such data will become available in the future, argue for their much fuller exploitation. Making the original data more accessible through public-use tapes would enhance this goal. The resulting assessments of the relationship between the different migrant typologies and the characteristics of places of origin and destination, as well as assessment of socio-economic differentials among the different types, should prove particularly valuable for policy formation and for evaluation of the impact on migration of varying patterns of urban and rural development and efforts to control population movement and urban growth.

(11) As a first step towards ensuring comprehensive assessment of population movement in given countries in relation to development programmes and urbanization and full exploitation of available data, expert committees need to be established to develop inventories of data and to formulate research guidelines. The models of analysis that are developed through such efforts should have sufficient elasticity to allow for variations in local situations. Continuous monitoring of the uses of migration data should provide a firmer basis for recommendations for modifications in the conceptual framework employed as well as the data collection systems and analytical procedures.

(12) All data collection and tabulation efforts in any particular country should grow out of co-operative activities among the national statistical agencies, the major research institutions in the country and the groups responsible for policy formation and implementation. Such co-operation is essential to ensure that the information needed as the basis for policy formation and evaluation shall be obtained and that the policy agencies shall also be made aware of key questions raised and the insights provided by ongoing research.

(13) If research on the patterns of population movement is to prove useful in the formulation and implementation of population redistribution policies, data-collection systems must incorporate attention not only to the migration and movement variables but to the related social and economic indicators that are likely to serve as measures of the success or failure of particular policies. Too often, even though migration data are available, the relevant social, economic and political indicators of development or modernization are not available to allow their integrated use with the migration statistics. The need for such data at the local level is particularly crucial. Co-ordination of data-collection systems becomes essential if efforts to assess the impact of policies are to include attention both to direct and indirect policies as well as to successful and unsuccessful policies.

(14) Research on policy-relevant issues needs to go well beyond traditional migration analyses to include attention to all stages of policy development, from the initial exploration of the problem area to the actual efforts at implementation.[52] The Comparative Project of Rural Resettlement[53] of the Association of Southeast Asian Nations (ASEAN), in which surveys of migrant settlers are being complemented by surveys of key officials involved in the development of resettlement projects and in the implementation of these programmes, provides a useful example for development of research involving multilevel assessment of the interrelationships between population movement and policy. Inherent in any such assessment is the need to give attention to the unanticipated consequences of given policies and programmes on in-migration and out-migration levels and differentials. In-depth evaluation of the characteristics of migrants and their motives for moving and choice of destination should help achieve this goal. As part of the assessment of policies intended to affect population redistribution, all specific programmes designed to control population movement in any way, as well as to control the rates of growth and/or location of cities, should incorporate plans for collecting and analyzing the data essential to an evaluation of the programme design. All too frequently, the decision to evaluate is made *ex post facto* and the data available are often found to be inappropriate for the evaluation.

Furthermore, because post-censal estimates and population projections play an important role in policy formulation and programme development, the accuracy of the estimates and projections, especially for small areas, can seriously affect the success of the programmes. The importance of the migration component in such estimates and projections argues strongly for the need for both adequate migration data and improved methods for estimating and projecting migration. Concurrently, it must be recognized that any projections made may affect decisions which can, in turn, directly or indirectly affect the volume and character of population movement. The complexity of the interrelationships adds weight to the need for close monitoring of all elements in the redistribution process.

[51] Hope T. Eldridge, "Primary, secondary, and return migration in the United States, 1955-60", *Demography*, vol. 2, No. 2 (1965), pp. 444–455; J. del Rosario, M. Lourdes and Y. Kim, op. cit.; Sidney Goldstein and Alice Goldstein, "Differentials in repeat and return migration in Thailand, 1965-1970", 1978 (mimeographed); and Joan M. Herold, "Female migration in Chile: types of moves and socio-economic characteristics", *Demography*, vol. 16, No. 2 (May 1979), pp. 257–277.

[52] Economic and Social Commission for Asia and the Pacific, *Problems to Be Solved in the Development of Data for Integrated Population and Development Planning*, Report of an Expert Group Meeting, Asian Population Studies Series, No. 42 (ST/ESCAP/75) (Bangkok, Thailand, 1978).

[53] Association of Southeast Asian Nations, *Report of FAO/UNFPA/ASEAN Workshop on Migration in Relation to Rural Development in ASEAN Countries*, Bangkok, Thailand, 21–25 November 1977 (Rome, Food and Agriculture Organization of the United Nations, 1977).

(15) Because of the close interrelationships between research on population movement and that on the urban-rural population structure, census and survey data should be collected in terms of small-area data, that is, by localities and urban-rural status.[54] This procedure will, in turn, allow maximum use of locality data for relating the characteristics of migrants to their places of origin and destination and for assessing the comparative impact of migration and natural increase on the growth of particular localities and on development efforts. Moreover, a maximum amount of information should be obtained about given localities, including data on the characteristics of the population as well as on the various facilities and social and economic activities that are relevant to population structure and change.

To achieve these goals, efforts should be initiated to utilize all available data to develop systems of geocoding. This would involve compiling a comprehensive set of indicators on population characteristics, environmental and economic conditions, infrastructures, natural crises and other relevant variables, and compiling and coding by local area, preferably at the village and town level for as many points in time as feasible. The data files prepared for small areal units can, in turn, serve as building-blocks for delineating the characteristics of large units. Availability of such integrated sets of contextual information for local areas would facilitate evaluation of causes and consequences of movement, particularly in research involving comparisons among different places and for the same place over time.

(16) In all future data-collection efforts, but especially in the 1980 round of censuses, steps should be taken to ensure that data shall become available quickly for analytical purposes and to provide easier access to those data by scholars and policy-makers. The considerable lag that now often characterizes access to basic data and the great difficulty often encountered by scholars in gaining access serve as major impediments to their use for the formulation and evaluation of policies relevant to population movement. Efforts must be initiated early to make available the necessary financial resources and expertise to expedite the preparation of census and national survey data, especially sample public-use tapes, and to otherwise facilitate access to these materials.

(17) As part of any programme to enhance data utilization, resources should also be made available to support a series of special census statistical publications and/or monographs in conjunction with the 1980 census round. Such earlier reports as have been published using 1960 and 1970 census data should prove useful as models.[55] Laying the groundwork for such monographs in advance of the census should ensure collection of the most appropriate data, expedite the production of the reports and enhance greater comparability among countries in order to facilitate comparative analysis. The recent efforts of ESCAP in developing a series of census monographs on migration, using 1970 materials, should prove most valuable in this respect.

The ESCAP project sponsors reports on the macro analysis of migration and urbanization for the major countries of the region. These reports are being prepared by experts in each country, with ESCAP assisting in the production and/or design of special cross-tabulations of the 1970 census data. For each country, the report will cover population distribution, levels and trends in urbanization, patterns of migration, rates of development in urban and rural areas and national policies related to population distribution. When these country studies are completed, ESCAP is planning to make a cross-national comparative study of the relations of migration and urbanization to development. Particular attention will be given to similarities and differences in causal factors affecting redistribution patterns, the impact of urban and rural development on movement; the impact, in turn, of population movement on urbanization; and the impact of the size and structure of urbanization on national development.

(18) As suggested by the arguments presented in point 19 of the research priorities, the value of research on population movement will be greatly enhanced if it can be undertaken on a comparative basis. Such research requires that the same basic instruments and analytical procedures be used in different countries in order to allow better insights into the way in which the large array of locational, developmental, social and political factors affect population movement. Such an approach will also allow more careful assessment of the ways in which movement relates to different types of urban hierarchies (in terms of size and function of cities) and to policies designed to control population flow and urban growth. Several efforts in this direction have already been made:

(*a*) The Committee on Urbanization and Population Redistribution of IUSSP undertook the sponsorship of a series of country case studies to provide an in-depth assessment of comparative patterns of world urbanization.[56] The Committee believed that the need to assess in depth the urbanization process and the implications of urbanization for social and economic development could best be achieved by a number of intensive studies of countries in different parts of the world, representing different stages of development and confronted with different types of problems. The

[54] Economic and Social Commission for Asia and the Pacific, op. cit.

[55] See, for example, United States of America, Bureau of the Census, "Lifetime and recent migration", *1970 Census of Population* (Washington, D.C., Government Printing Office, 1973), vol. II, PC(2)-2D; Henry S. Shryock, Jr., *Population Mobility within the United States* (Chicago, Illinois, University of Chicago, Community and Family Study Center, 1964); F. Arnold and S. Boonpratuang, op. cit.

[56] Sidney Goldstein and David F. Sly, eds., *Patterns of Urbanization: Country Case Studies*, 2 v. (Liège, International Union for the Scientific Study of Population, 1976).

initial comparative series was intended to be only illustrative of the range of urbanization patterns; one of its main purposes was to provide insights for further comparative research.

The Committee prepared a detailed outline of the topics regarded as essential to a comprehensive evaluation of the demographic aspects of urbanization in population redistribution in each study. The Committee recognized that the list of topics was ambitious and that the data available in individual countries and the extent to which particular concerns constitute problem areas would vary considerably among countries and would affect the coverage given to particular topics in specific country reports. The variations in the contents and emphases of the final reports in large measure reflect these constraints. The 11 country case studies, together with an overview which draws upon both the country case studies and discussions of them at a seminar, highlight the similarities and differences in urbanization patterns among countries at various stages of development and with different social, economic, political and cultural histories. Based on the same sources, a guide-line was also developed for future research programmes for individual countries and international groups;

(*b*) As part of their general programmes of national development, the ASEAN countries have recognized the importance of the relations between population distribution and rural development. Accordingly, as the first phase of co-operative research, the effects of rural development on migration; and, even more specifically, the effects of resettlement programmes on migration are being investigated.[57] In order to do so, similar surveys are to be carried out in ASEAN countries (excluding Singapore) on various types of resettlement projects. The overall purpose of these studies is to provide the information necessary for deciding future directions for the establishment and execution of resettlement programmes. The country studies include in-depth interviews with various officials, from the national to the local level, as well as a comprehensive survey of the settlers themselves. These studies will describe the populations and the conditions of the settlements and attempt to assess their effects on recent and future migratory movements. The current studies are to be used as a first step towards developing in each country a national policy on population distribution and programmes for its implementation. In order to ensure the maximum opportunity for comparative analysis, detailed outlines and model questionnaires were developed of information to be collected from various officials, core items to be included in the sample survey of settlers and data needed for community profiles. Each country is free, however, to elaborate the questions or modify them in any way that best fits national conditions;

(*c*) The Comparative Urbanization Project of the Population Studies and Training Center of Brown University has sponsored a series of field studies which focus on the adjustment of migrants to large cities in less developed countries.[58] These studies are designed to accumulate a body of comparative data, the analysis of which will allow better insights into what demographic characteristics distinguish migrants from non-migrants, whether these characteristics affect adjustment in the urban area and what implications the adjustment process has for the urban area to which the migrants move. A common study design is utilized, which includes a core questionnaire supplemented by additional questions to reflect both local interests and the interests of the individual scholar undertaking the research. Although the specific sample sizes have varied, approximately 750 households have been interviewed in each of the four cities (Seoul, Republic of Korea; Surabaya, Indonesia; Bogotá, Colombia; and Tehran, Iran) in which surveys have been completed to date. The study populations, composed of both migrants and natives, were drawn exclusively from the cities, thereby permitting only migrant/non-migrant comparisons at the point of destination. Retrospective data allowed some assessment of the situation at place of origin. The inference from the static to the dynamic through cross-sectional data has drawbacks, however, including the potential bias resulting from the absence of those in-migrants who subsequently moved on to other places or returned to their place of origin. In all studies, the primary comparison is made between migrants and urban natives, with the latter serving as the standard reference group against which migrant behaviour is assessed to determine the extent of adjustment. Judging adjustment in this way assumes that longer duration of residence leads to closer approximation of urban behaviour patterns and that the process of adjustment has remained fairly constant over time. To measure the degree of adjustment, comparisons may then be made between migrants with varying durations of residence, while controlling for such key variables as migrant's background, prior urban exposure, age and education. The comparable elements in the study design allow for identification of what is unique and what is common to the various settings. Based on the experience of the studies undertaken to date in urban settings, new studies have already been initiated in the Republic of Korea and Sri Lanka under the Comparative Urbanization Project, which will focus on efforts at rural settlement programmes and the impact of return migration from urban places to rural origins;

(*d*) Recognizing the key role of mobility in the development process, ESCAP has initiated a project designed to assist officials responsible for the formulation of population redistribution policies and the development of programmes to control the volume and direction of population movement.[59] The research is

[57] Association of Southeast Asian Nations, op. cit., pp. 1–2.

[58] Sarah Green and others, "Comparative studies of migrant adjustment in Asian cities", *International Migration Review*, vol. 12, No. 1 (Spring 1978), pp. 66–116.

[59] Economic and Social Commission for Asia and the Pacific,

designed to reveal the links between temporal variations in the urban/rural rates of development and variations in the volume, type and direction of population movement by identifying the socio-economic and socio-psychological factors that are either causes or consequences of redistribution. This objective will be achieved through an in-country programme of activities processed in three phases: macro analysis of migration and urbanization based on census data and other available materials; micro analysis of population movements through the conduct of a series of national migration surveys; utilization of the research findings for policy formulation; and programme development directly related to the control of population movements. For the first phase, begun in July 1977, ESCAP has produced a special set of cross-tabulations of 1970 census data on the socio-economic characteristics of migrants and non-migrants in urban localities of various size and in rural areas. The analysis of the first phase is being prepared by national research teams and will be published in a series of country reports. The data to be collected in the national migration survey will be comprehensive in nature. They will provide information on the characteristics of migrants versus non-migrants, permanent versus circular/seasonal and return migrants, and potential migrants and commuters. Migration histories will be collected that are designed to include *ex post facto* information on the characteristics of the migrants at the time of their migration and the decision-making process that led to movement. A distinction will be made between the factors that motivate the migrants to leave their usual place of residence and the factors governing the choice of their destination. The links established through remittances and visits between migrants and their relatives and friends and the impact on development will be investigated. The research findings from the analysis of census and survey data will be utilized in the third phase, which will focus on policy formulation and programme development. A leading national planning agency will undertake the preparation of a discussion paper on an appropriate population redistribution policy and programmes to be developed that can effectively control population movements in connection with such developmental issues as land use, resettlement programmes, agrarian reform, decentralization of industry, development of medium-sized cities, establishment of satellite towns, improving the quality of life in large cities, regional economic planning and other related issues;[60]

(*e*) In 1976, the International Labor Organisation (ILO) initiated a research project on migration and employment which involves detailed surveys of rural and urban households in Ecuador, Guyana, India and Nigeria. Plans call for similar studies in other countries. The main focus of this research is described[61] as identification of the determinants of migration and the analysis of the interaction between rural-urban migration and socio-economic change, emphasizing the functions of migration in the transformation of rural and urban economies and the effects of migration on production, technological change, population growth, structure and level of employment and unemployment and income distribution between and within rural and urban areas.

The ongoing studies attempt to cope with two methodological issues; as the ILO puts it,

> "First, most previous studies of migration have only analysed the determinants of migration (whereas the present studies concentrate on the consequences), and have suffered from a fundamental shortening in that the surveys have been located in either rural or urban areas, with the predictable consequence that only a partial analysis has been possible. In analysing the process of migration it is necessary to study both the sending and receiving areas and to identify not only current migrants but also return migrants and non-migrants. Second, and more important, is the development and refinement of various methodologies for analysis of the social and economic implications of migration. Micro-behavioural, inter-village comparison, and macro-structural analyses are still being carried out."[62]

Although the various ILO surveys are not identical in design, the Indian study exemplifies the type of design and substantive concerns encompassed by the different studies. It covered 4,500 households in both rural and urban areas of the Ludhiana district and also included a survey of migrants to Ludhiana city who were previously identified in the rural survey. Both the rural and the urban surveys identified not only the migrants but those who did not migrate, those who were on the verge of migrating, those who had no inclination to migrate and those who had migrated but had subsequently returned. In addition to information on migration, data were also collected on employment, income, savings, investment, assets, cultivation practices and technology, fertility and remittances.

Summary

Interest in the levels and trends of migration, circular movement and commuting derives from concern with the quality of life in rural and urban places. Because of the high rates of population growth in most less developed countries and the desire to reduce urban and rural poverty, growing attention now fo-

"Progress of work and proposed further activities on the Comparative Study of the Relationships of Migration and Urbanization to Development in the ESCAP Region", Bangkok, 1979 (mimeographed).

[60] Ibid.

[61] A. S. Oberai, "Determinants of rural-urban migration and its implications for rural areas with special reference to ILO research", in International Union for the Scientific Study of Population, *Conference on Economic and Demographic Change: Issues for the 1980's; Solicited Papers* (Liège, n.d.).

[62] International Labour Organisation, *World Employment Programme, Population and Development: A Progress Report on ILO Research* (Geneva, 1979), p. 9.

cuses on the relationship between population movement and development; on the ways in which migration contributes to the exacerbation of urban problems and the reduction of rural poverty; and on the ways in which efforts at rural development are affected by migration and in turn may contribute to migration. In view of the projected increases in both rural and urban populations and the anticipated continued growth of large cities, these concerns take on special significance. Of particular concern is the growing rural population reservoir, which will have to be provided with adequate sources of livelihood in rural areas if massive rural-urban migration is not to compound the problems of cities.

Efforts to assess the relationship between population movement and the problems of cities and rural areas, as well as the formulation of policies and programmes designed to cope with these problems and to foster development, are hampered by the lack of data on the various forms of population movement, how they have changed over time and what functions they perform for the individual and for the communities of origin and destination. Some of the large number of questions that can be raised concern:

(*a*) The extent to which one or the other form of movement in itself or in combination relieves rural pressures;

(*b*) The extent to which temporary migration in the form of commuting and/or circular movement relieves the problems that such cities as Lagos, Manila and Mexico City would otherwise face if all the movers were to become permanent migrants;

(*c*) The extent to which the interchange between urban and rural places, and in particular the interchange resulting from return movement by commuters and circular migrants, contributes to the development and modernization of rural areas through the introduction of new ideas and behaviour and through the remittances of money and goods;

(*d*) How crucial, in fact, such remittances are for meeting the basic needs of rural locations, thereby contributing to the more equitable distribution of income generated in the cities;

(*e*) Whether Governments should perhaps encourage commuting and circular movement in lieu of migration because of the lower demands such movers would place on urban services and the greater contribution they would make to the development of their home places;

(*f*) Whether encouragement of even greater reliance upon commuting and circular movement would continue to provide, both for the movers and for their respective communities, the advantages of continuing strong social ties associated with traditional societies and the gains from participation in the economic opportunities available in towns and cities;

(*g*) How development efforts, such as improved transportation and educational systems, affect the levels of migration and circulation, and the impact that these changes have on the development process.

Still other questions relate to:

(*a*) Whether migration operates selectively with respect to fertility levels of movers;

(*b*) What the interrelations are between population movement and fertility at places of origin and destination;

(*c*) Whether development efforts designed to control migration have positive or negative effects on fertility;

(*d*) What the interrelations are between internal and international migration;

(*e*) Whether Governments should go beyond the "naturally evolved" patterns of urban growth and population movement and adopt policies designed to create growth centres in other regions;

(*f*) By their very presence, and by the opportunities they provide for diverting migrants from the large cities and for encouraging additional commuting and circular movement, whether such centres alleviate the pressures on existing cities and rural areas and create further opportunities for rural and urban interchange.

The evidence already available from studies done in less developed countries strongly documents the need for major attention to migration and other forms of population movement, including commuting and circulation, in all forthcoming efforts to assess demographic change. It argues for inclusion in censuses of a sufficient number of questions to allow some detection of the volume and character of movement. This effort should be undertaken not just at the provincial level but for smaller units and certainly for rural and urban areas. Even if the resulting data cannot be tabulated or published, their availability on tape, if only for a sample of the total national population, would represent a major forward step towards allowing comprehensive assessment of all forms of population movement and the way in which they relate to both urbanization and the rural situation.

In national sample surveys, in community surveys and in special purpose surveys, the opportunity to obtain more comprehensive data on population movement is enhanced. Here, complete residential histories, encompassing both temporary and permanent migration, should be obtained with concurrent attention to work histories, so that assessment of movement in relation to social and economic change and especially in relation to programmes designed to affect movement can be undertaken. In doing so, the limitations inherent in surveys generally and in retrospective questions in particular must be recognized and every effort made to initiate innovative research, including use of the life-cycle matrix, the multiplicity approach and dual record systems, as a way of enhancing the quality of the data. Given the concerns with retrospective data, particularly as they relate to short-term movement, prospective panel studies will also have to be designed and conducted in such a way as to ensure maximum opportunities for follow-up, so that the losses resulting from migration do not bias the

data obtained in succeeding survey rounds. Such data in particular are essential to the preparation of accurate population projections since they must be based on adequate attention to population movement as a component of change and must take account of the potential impact of redistribution policies on future movement.

Many of the less developed countries have already conducted national demographic surveys and are planning others. Even more numerous are the individual community studies being undertaken. Frequent opportunities therefore arise for obtaining a rich body of data on migration, circulation and commuting, providing that the need for such data can be impressed upon the appropriate authorities and scholars and care is taken in execution of the study design. Moreover, as far as feasible, efforts must be exerted to create maximum opportunity for comparative analyses of migration and circulation levels and patterns, in order to assess the effects of differences in population scale and socio-economic conditions both within countries and regions and between regions.

Above all, the data collection must be guided both by appropriate theoretical concerns and by appropriate questions and measures. Building on the insights provided by the studies completed to date, the historical and contemporary conditions under which different types of movement occur in traditional societies need to be specified more clearly and their links to the modernization process both as cause and as effect need elaboration. A pressing need exists to conceptualize rural-urban mobility so that all movers and not only selective subsets can be distinguished from stayers and so that the role of different types of movement in the total development process can be more meaningfully assessed as the basis for formulating and implementing more realistic redistribution policies.

Through such varied and combined efforts, and with adequate attention to the individual movers and to the characteristics and conditions of their places of origin and destination, one should be able to ascertain the conditions leading to the decision on the part of residents of particular locations to stay or to move. If the decision is made to move, it should be possible to ascertain what factors, both individual and environmental, account for the choice of the type of move—commuting, circulation, or migration—and how the specific destination of the move was chosen in lieu of alternative destinations. Furthermore, especially through the prospective type of study, research should inquire into the adjustment to the move, later decisions to change from one form of movement to another (for example, from commuting to circulation, or from circulation to permanent migration), alterations in intentions with respect to permanence, and the decision on whether to return to place of origin or to move on to a new destination. For all types of moves, it is necessary to assess fully the nature of the interaction with place of origin and the effect which the interaction has on the stayers. Some steps towards answering these questions have already been undertaken and such studies provide valuable models for future research.

The agenda of research and research needs outlined here is a long, complex and challenging one. It obviously is not intended to be fully implemented in any given location or by any specified time. To do so would overwhelm both researchers and planners with the task of collecting and analysing data sets that go well beyond what many need and what most can realistically use. Priorities obviously need to be established, but these must vary by the status of the data collection systems already extant in given places; by the local needs as determined by perceptions of problem areas involving population distribution and by policy efforts to cope with these; and by the personnel and financial resources available to assess existing data and to develop and utilize new collection and analysis systems.

The foregoing agenda has not been prepared as a set of ranked priorities, but rather as an inventory, still incomplete, against which local needs, opportunities and resources can be checked. If there is one message that emerges from this review, it is that it would be folly to proceed to formulate policies or to evaluate them in the absence of a firm data base, and adequate research attention (including both theoretical and methodological concerns) to the basic questions and problems towards which the policy efforts are being directed. As a corollary, in all such efforts to assure adequate information as the basis for policy formulation, highest priority should be given to fuller and more effective exploitation of existing data, with new materials being collected only when and where significant gaps are identified. Only through a research agenda that takes due account of conceptual, data and policy concerns will the insights necessary for development of more effective redistribution policies be gained and the basis thereby established for having population movement play the key role it could and should in reducing inequities in the quality of life within and between rural and urban populations.

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ANNEX I

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ANNEX II

List of documents

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IESA/P/AC.15/18	Arguments for government intervention to influence the urban size distribution Piotr Korcelli

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