Introduction

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Economic development is fundamentally a process of structural transformation[1]. This involves the reallocation of productive factors from traditional agriculture to modern agriculture, industry and services, and the reallocation of those factors among industrial and service sector activities. If successful in accelerating economic growth, this process involves shifting resources from low- to high-productivity sectors. More broadly, sustained economic growth is associated with the capacity to diversify domestic production structure: that is, to generate new activities, to strengthen economic linkages within the country and to create domestic technological capabilities.

The industrial and modern service sectors typically contribute dynamically to this diversification process. Indeed, the evidence of the past quarter century – or, indeed, of the post-war era in the developing world – clearly indicates that rapid growth in the developing world has been invariably associated with diversification of production into manufacturing and modern services, while slow growth has been usually associated with swelling low-productivity services.

Reflection on industrial policies in developing countries should be concerned with three important dimensions: *innovations* (in a Schumpeterian sense), *linkages* (Hirschman), and *surplus labour* (Lewis). Those three dimensions are examined in turn.

Innovation should be considered in a broad sense, as the development of new economic activities or new ways of doing existing activities. It is important in this regard to recognize the role, not only of technological but also of non-technological innovations. For instance, developing new marketing networks and innovations in marketing, as well as the development of new organisational practices or structures are often more important than the adoption of new production technologies. Indeed, the ability to reap the benefits from new technologies often depends on innovations in distribution and organisation occurring simultaneously. The microeconomics literature has tended to focus too much on production, and too little on sales, marketing and distribution. Schumpeter's concept of "new combinations" captures much better this broad concept of innovation than the usual association of this concept with technological change in production.

Innovations, in turn, tend to be different in developing countries and in developed countries. For the former, technological change often consists in entering activities and sectors, or the adoption of technologies or marketing and organisational strategies, which are already well established in developed

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countries. For industrial countries, moving the technological frontier, or developing new non-technological practices are the major forms of innovation. Entrepreneurs are the ones who organize and lead such forays into unexplored territory. Their appetite for risk may, however, be dulled if the prospect of profiting from a successful discovery is small. Non-technological innovation, such as conquering a new market or developing a new marketing strategy, may be more important in the early stages of development but it can be easily imitated and is also difficult to protect through conventional forms of intellectual property rights.

It is also necessary to go beyond the neo-classical view, in which technological progress is exogenous and technology is often embodied in industrial equipment. On the contrary, the process of absorption of technology by firms is an active and costly process. Furthermore, the development of new activities may be fraught with coordination failures and entry costs vary across sectors. Most developing countries enter international markets with commodities or basic manufactures and assembly operations, because the production of high-tech products requires a pre-existing industrial and technological base. One of the main challenges of industrial policy is thus to understand better how to support the development, in a coordinated fashion, of production and technological capabilities in new economic activities. It is in this context that "clusters" of interlinked firms, trading goods and services as well as ideas and personnel, are seen as valuable features of the industrial landscape.

Linkages then are crucial to "systemic competitiveness" – i.e., with competitiveness that goes beyond the individual firm to become a feature of certain sectors in specific regions or of whole regions and countries. The development of linkages has both supply and demand side effects. The latter determine the magnitude of macroeconomic multipliers; the former are associated with the positive externalities that different economic agents generate among themselves through cost reductions induced by economies of scale and scope in production, lower transport and transaction costs (economies of agglomeration), the induced provision of more specialized inputs or services (economies of specialization), and the sharing of knowledge between firms and the development of human capital that can move between firms (knowledge spillovers). This implies that developing domestic linkages is more important than integration into world markets per se, and that not all patterns of integration into international markets have the same effect on economic growth. Thus, the countries that profit most from FDI are those whose domestic firms and institutions build domestic technological capability, both through investment in own R&D and workforce education and training, and through linkages created between domestic firms and foreign affiliates. At the same time, a successful export strategy is highly dependent on how the export sectors are integrated with other domestic economic activities, not least in terms of employment generation.

In developing countries, a sizeable part of the workforce is underemployed in low-productivity activities. As Lewis argued, this surplus labour is available in virtually unlimited supply to the modern sector, where it could be employed more productively. The absorption of this *surplus labour* or, in the opposite case, the incapacity to do so, is generally a more important determinant of overall factor productivity growth in developing countries than technological change per se. Thus far, globalization has had only a limited impact on surplus labour absorption. In fact, in some parts of the world, informal employment in low productivity sectors has grown with the liberalization of trade and the implementation of efficiency-increasing domestic economic reforms. In these cases, aggregate productivity may show a poor performance even if the modern sectors are immersed in a dynamic process of technological change. Industrial policies should thus aim at reducing surplus labour in the economy.

Taking into account surplus labour in the design of industrial policies can lead to very different prescriptions from those emerging from a neo-classical paradigm, which assumes full employment. Thus, industrial policies and the process of production sector restructuring generated by structural reforms should be measured against their potential effects on surplus labour in the economy. In this regard, linkages are once again crucial, since what matters from an employment perspective is the overall impact of industrial restructuring and development on job creation, even if many of the new jobs are in a growing service sector stimulated by and supporting industrial activity or, for that matter, in producing food crops and other agricultural products to satisfy changing consumer preferences.

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Let me mention, finally, two elements that must be taken into account in understanding the links between industrial policies and growth. The first is that domestic factors are not the sole determinant of domestic policies. The regional and global economic environments are also essential determinants of growth, an issue usually overlooked in the massive literature on economic growth in recent decades. During the so-called golden age of 1950-1973, most developing regions experienced rapid economic growth. In contrast, the final two decades of the twentieth century brought a large number of "growth collapses", with only a small number of developing economies able to sustain fast rates of growth. Furthermore, widening international inequality diminishes the growth prospects of the less advantaged countries. This is so because markets may exacerbate inequality, as successful countries accumulate richer endowments and as capital follows success, while those left behind remain more vulnerable to shocks in international financial and commodity markets.

Second, development is path-dependent, i.e., long-run growth prospects depend on an economy's trajectory. The importance of dynamic learning

economies to economic development implies that the opportunities open to economic agents are largely determined by their production experience. Loss of experience may thus have cumulative effects on growth, as illustrated in the 1980s by the diverging experience of Latin America (which suffered major adverse macroeconomic shocks) and Asia (which did not). This is not, however, a recipe for fatalism à la the "history (or geography) is destiny" school of development. Several countries have been able to emerge from extended periods of relative stagnation or high economic volatility to embark on new development paths characterised by consistently high growth. Those experiences do, however, suggest the importance of government policy in helping create an environment which provides sufficient rewards to entrepreneurship and innovation, and also in addressing the coordination failures and informational externalities which can inhibit a sustainable process of industrial development.

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The essays in this volume develop a number of the themes touched upon here – the importance of *patterns* of industrial diversification and the opportunities they provide for linkage and knowledge spillover (Rodrik); the need for a broader view of innovation, encompassing not only technology but also marketing, logistics, management and organization (Dahlman); the realization that FDI, including South-South investments, do not per se have a positive impact on the economic development of recipient countries (Aykut and Goldstein); the scope beyond industry – in certain areas of agriculture and services – for innovation, linkage and high-value-added production (Kjöllerström and Dallto; Singh); the employment-creating and poverty-reducing effects of different patterns of industrial development (Kniivilä); and the importance of the external environment to shaping industrial development prospects (Adhikari and Yamamoto; Dahlman). While not mentioned explicitly here, some of the essays which follow deal with the ways by which governments and corporations have been addressing the social and environmental impacts of industrial development (Peck and Chipman; Bhandarkar and Alvarez-Rivero).

Notes

1 For further elaboration of the arguments here, see Ocampo (2005), "The Quest for Dynamic Efficiency: Structural Dynamics and Economic Growth in Developing Countries", in José Antonio Ocampo (editor), Beyond Reforms: Structural Dynamics and Macroeconomic Vulnerability, Stanford University Press, ECLAC and World Bank, Palo Alto, CA. See also United Nations (2006), World Economic and Social Survey 2006: Diverging Growth and Development, New York (Department of Economic and Social Affairs; E/2006/50/Rev.1/ST/ESA/306).