The Role of the State and the Market in Poverty Eradication

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Abstract: In this paper, we postulate through a stylized model that the essence of development lie with human capital accumulation, in particular education, both because education could provide a self-sustaining force for development, as experience from East Asia shows, and because it is essentially one of the few things which development should really be about. Poverty, in the long run, is to be tackled through education and development, although an anti-poverty program may have more immediate priorities in the short term. However, a human capital accumulation-centered development strategy could not entirely rely on the market. The state must have vision, leadership and strategic planning, as well as make other active interventions in the normal functioning of the market. The paper discusses in particular the case of the market for education, and finds ample rooms for state action in this market, if the long run aims of full and successful development and poverty eradication are to be achieved.

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1. Introduction

In examining the respective role of the market and state in eradicating poverty, it is first of all important to expand the scope of the enquiry to encompass not only poverty but also income inequality and economic growth. Much of the modern experience of economic development has shown that, save in a pure Malthusian situation which may have sometimes occurred but which is generally rare, poverty is but closely related to income inequality, and both are closely connected with growth. In our attempt to find effective ways to combat poverty, we must therefore cast our attention widely enough to examine the effect of inequality and growth on poverty. In turn, reductions and eradications of poverty can have an important impact on growth and inequality.

This triangular set of relationships among poverty, growth and income inequality has, in fact, received much attention in the literature (see, e.g., Bourguognon, 2004, and AFD-EUDN, 2003) so the basic points there need not be further labored here. Rather, what this paper intends to do is to push the enquiry a step further by looking at some of the key relationships within this triangle *across time*, in a manner that would reflect key features of the process of economic development facing a developing country. For much of the poverty which we see in the world today lies, in fact, within these countries, and the persistence of poverty in these countries may in part have to do with certain structural factors that these countries face today. Understanding such structural factors is important, as it may suggest possible room for effective intervention, as well as limits to such intervention. Within the framework of the poverty-growth-inequality triangle, this also means understanding the process of inequality and, indeed, the process of development itself.

The process of development that we have in mind is one that involves some rather fundamental changes to the existing social and economic structure of a country. This primarily takes the form of industrialization and urbanization. Early development economists such as Lewis and Kuznets studied and provided much insight into this process. The literature on poverty trap and endogenous growth more recently has continued that tradition. Even more recently, a growing body of literature has appeared which aims to endogenize inequality. It will not be possible to summarize these bodies of literature, but they offer important insights on which I will draw in my discussion.

Below Section 2 presents a stylized model of what I see as the central aspects of the process of economic development which a poor and developing country is expected to go through, and the accompanying challenges it is likely to face as it attempts to successfully manage its development. In this stylized model, as we will see, fundamental forces exist to cause a Kuznets-type inverse-U relationship to arise between income inequality and per capita income, but the exact trajectory of this relationship need not be completely determined by these forces. Much can be done to change the shape of this trajectory. In terms of poverty, this can mean substantially more or substantially less poverty at any particular point in time during its developmental phase. This stylized model will then serve as a framework for our discussion in Section 3 of the respective role of the market and state in assisting development and in reducing and eradicating poverty. Owing to space limitation, I shall only discuss the issues in respect of one market, the market for education

2. A Stylized Model of Development

2.1 The Model

Almost by definition, as an economy embarks on the journey of economic development, it will have to undergo some major structural changes. Specifically, the "modern" sector (often understood to be the industrial sector, but it need not be) will grow, attracting entrepreneurs with the financial capital and workers with the right skills and education to enter into the sector. Almost surely, these people will earn a higher income, which is the reason why they moved into this sector in the first place. On the other hand, the "traditional" sector (primarily agriculture) may concomitantly be burdened with "surplus" labor (i.e. labor having low or close to zero marginal labor productivity), and frequently with high birth rates. This is the setting Lewis (1954) was concerned with in his pioneering contribution to the subject.

The presence of a possibly large income differential in favor of a relatively small section of the population in the early stages of development is clearly to worsen income inequality in that economy. Over time, however, such differentials are likely to attract an increasing number of people to enter into the modern sector, through acquisition of appropriate skills and education. As more and more people move into this sector, the incomes accruing from it will be spread more widely. At the same time, earnings in the agricultural sector is also likely to improve (not only might labor productivity improve but so would demand for farm produce). And with generally better education and health services for the agricultural sector, brought about by the modernization process, birth rates may fall in rural as well as unban areas, reducing the rate of growth of the labor force. Eventually, a point will be reached when income distribution improves. This is essentially the reason which led Kuznets (1955) to advance the now well-known inverse-U hypothesis between income inequality and economic growth.

But it may be worth exploring in more detail how all this might happen. What my stylized model does is to focus on the crucial role human capital accumulation plays in the process.[1] Needless to say, financial capital is important, and some models in the endogenous inequality literature have indeed focused on that, where imperfect capital markets result in some (the rich) being able to borrow funds and others (the poor) not so to invest in worthwhile projects (Matsuyama, 2000). The distribution of financial assets is of course an important consideration that could have serious implications for the course and character of development. But, over the very long-run that we are considering, it could be argued that even the rich must have, in most cases, owed their wealth to human capital accumulations by their ancestors.[2] In any case, according to available wage share statistics (albeit being only an unreliable indicator), wage incomes in most developed countries in recent times typically account for over 75% of all incomes (in some countries such as Japan, reaching as high as over 85%). In other less developed countries, the ratio may be lower but is expected to rise. So if we are interested in the evolving shape of income distribution of a country, the first thing that we should consider is its wage incomes.

[1] This stylized model was first presented in Liu and Yin (2010) as a framework for understanding the long run factors that characterize and explain the economic success of many East Asian economies in the past several decades.

[2] Various forms of predatorily amassing of wealth may, of course, also have been a cause, but even in these cases, as classical economists would remind us, labor is, after all, the sole source of all wealth.

Thus in the stylized model below, I shall focus on human capital accumulation only. At an individual level, human capital accumulation (principally education, but also health) raises a person's productivity and hence income. From the point of view of an economy, such accumulation (increasingly better and more widespread education for the population) raises aggregate productivity and thereby aggregate income.[3] To examine the simplest possible case for this, we distinguish between "skilled" and "unskilled" labor only, who respectively work in a skilled and unskilled sector. What differentiates one from the other is education. An unskilled laborer could be anyone from a traditional agricultural worker to someone working in the modern sector or in an urban area but doing menial tasks or otherwise engaged in providing some low-value added services, often with little education. On the other hand, to become a skilled worker one has to undertake comparatively more, and sometimes a lot more, education, involving considerable human capital investment. Note that this categorization of the skilled and unskilled workers cannot but be left somewhat vague. In the early phases of development, an unskilled (mostly rural) laborer may well be illiterate. Subsequently, basic education may become popularized, so that even an unskilled worker may have to have some basic education. On the other hand, it might have required someone to have just above basic education by today's standards to be a skilled worker in the early phases of development, but subsequently it could require a person to receive a lot more than that, and often tertiary education, in order to qualify as a skilled worker. These changes are but part of a worldwide trend towards increasingly better and more widespread education in a society, which has happened in most countries from developed to developing over the last century.[4]

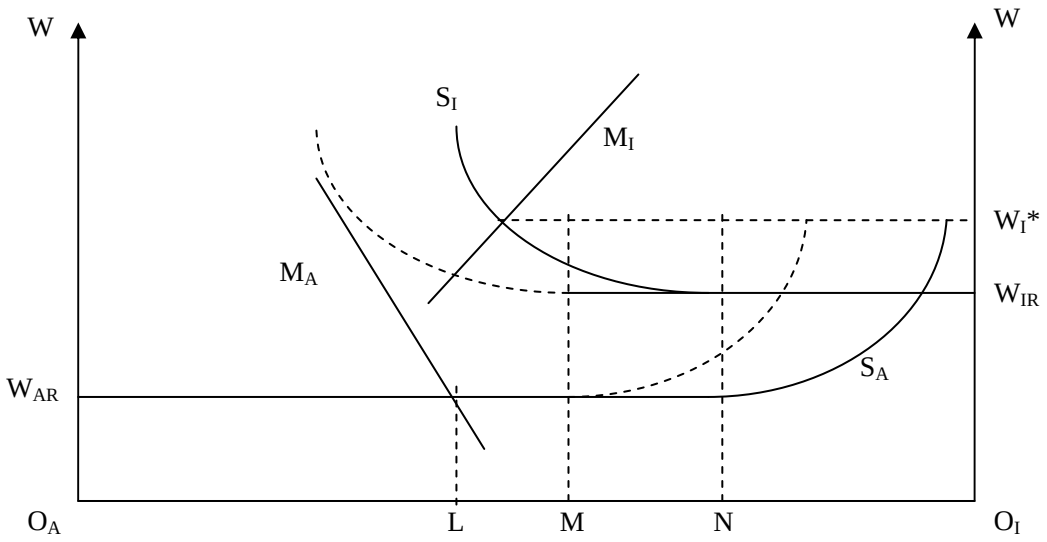
Figure 1 provides the basic elements to the model, where the supply curve of unskilled labor is S_A, and that of skilled labor S_I. The shape of these curves, each involving a flat and an upward sloping segment, needs some explanation. First, earlier literatures on development stressed the importance of rural surplus labor, meaning labor that produces a zero or close-to-zero agricultural marginal product. If such surplus labor indeed exists, then it could be argued that the opportunity cost of unskilled labor is simply its agricultural marginal product. This implies a zero or close-to-zero reservation wage rate. However, its opportunity cost is only one way to think about its reservation wage. There is also the factor called the "subjective cost of labor", which is a person's marginal disutility of labor (or marginal utility of foregone leisure) weighted by his marginal utility of income. Typically, this would give a positive value, and hence a positive reservation wage rate. Sometimes, though, where survival is at issue, the "subjective cost of labor", although positive, may fall to fairly low levels (as marginal utility of income in this case sharply rises vis-à-vis that of leisure—nothing is more important than survival, so to speak, not even the sheer drudgery of the labor involved!). In these cases, the "subjective cost of labor" for a person may well fall below the "minimum cost of living" that would be necessary to ensure a person's continued survival and continued supply of labor (that is, to ensure that he could make the same level of physical exertion indefinitely into the

[3] Additionally, it can raise the share of income accruing to labor, which should be good for income distribution. But I will not be concerned with this particular effect here.

[4] It is worth emphasizing that the basic dichotomy of skilled and unskilled workers is used here only as a simplifying device, to enable us to better develop a sense of what is involved. The underlying issues have been modelled as a case of "occupational choice" in the new literature on endogenous inequality, where the occupational choice space can be dichotomous, a multitude, or even a continuum. See Mookherjee and Ray (2005, 2010) and the references therein. Our dichotomous characterization leaves out, of course, the important role of entrepreneurs. See Banerjee and Newman (1993) for a model of how the otherwise identical agents differentiate into entrepreneurs and workers because of capital market imperfections, according to the initial distribution of wealth.

foreseeable future). It is this latter cost that we shall use as the reservation wage for unskilled labor. This is denoted by W_{AR} in Figure 1.[5]

Figure 1 A Two-Sector Model of Labor Markets for Skilled and Unskilled Labor in the Long Run



Secondly, regarding the reservation wage for the unskilled, let a premium reflecting the cost of past human capital investment be further added on top of the unskilled reservation wage. This, of course, necessitates the assumption of a perfect capital market whereby persons can borrow against future income to invest in education today. However, much of the economics literature has concluded that capital markets are, in fact, seriously imperfect, especially in developing countries.[6] In our stylized model, allowing for imperfections of the capital market could mean either that some unskilled workers are denied the opportunity to make the necessary investment in education to land them in the skilled category, or that such opportunities are not completely denied but they carry a higher cost, implying a higher necessary wage markup than if the capital market is perfect, to derive the reservation wage for the skilled. We shall, however, abstract from these complications. When we discuss the respective role of the market and state in eradicating poverty in Section 3, these will be among the issues discussed. In our stylized model, the uniform, post-markup reservation wage is W_{IR}.

Thirdly, since our focus is on human capital accumulation in an economy, we use the horizontal axis in Figure 1 to denote the number of workers in both the skilled and unskilled categories only. Levels of skilled and unskilled wages can, of course, affect the supply of labor hours by workers in the two sectors, but they would not influence the numbers of workers working in these sectors, which are solely determined by past education. However, with assumptions on social and cultural (or indeed legal) norms on standard number of hours to be worked by a worker over a given period (a day or week), the extra hours supplied by workers in a sector in response to a higher wage may be converted into an equivalent additional

[5] That is, under W_{AR}, a labourer may continue to deliver the same amount of labor per day or month indefinitely into the foreseeable future. A person may, of course, depend on his/her family for such survival and continued supply of labor, but the family's survival will in turn have to depend on the incomes earned by its members. For a critique of the concept of "subsistence wage", see Dasgupta (1997).

[6] Indeed, much of the endogenous literature has used this fact in their models, giving rise to some interesting results.

number of workers working in that sector. As may be expected, the higher are the wages for a sector, the greater is the number of hours supplied to it, and the greater is the equivalent number of workers working in that sectors.[7] .

The above explanations together then imply the shapes of the two labor supply curves as drawn in Figure 1. The horizontal distance between O_A and O_I, two origins of the graph, indicates the size of the full labor force. Initially, the O_AN portion of the workforce is unskilled, while the rest is skilled. Between O_A and N, the S_A curve is flat (any demand less than O_AN will not push up the unskilled wage rate W_A), while beyond N the curve slopes upwards (any demand beyond it will push up the wage rate). A parallel reasoning lies behind the shape of the S_I curve.

While supply-side factors in the stylized model essentially concern the long-run, demand-side ones are primarily about the short-run.[8] In Figure 1, demand for unskilled labor is given by the M_A curve, and for skilled labor M_I curve. They are given by the marginal revenue product of labor curves in the two sectors, which are in turn conditional on technology and product market prices for firms in these sectors. Although technology is not expected to change materially in the short run, product market conditions and prices may well do so. Both may give short-run shocks to the system. And when they do so, the two demand curves shift.

The model thus captures both long-run and short-run factors, and there are long-run and short-run outcomes to consider. In equilibrium, the markets for "hours of labor" are expected to clear in both sectors, giving rise to equilibrium wages for these sectors. However, while in the short run the hours supplied may equal the hours demanded, this need not mean that in the long-run, all those who are human capital-wise dedicated to a given sector are necessarily fully taken up by that sector (that is, there need not be full employment). Figure 1 depicts such a situation in the unskilled sector, where a demand curve such as drawn gives rise to a short-run equilibrium wage equal to the reservation wage. A significant number of unskilled workers (equal to the distance between points L sand N) are unemployed. On the other hand, the skilled sector shows full employment. It transpires to say that, in both sectors, all equilibrium wages that are above their respective reservation wages must mean full employment. However, if they are only just equal to the reservation wages, some level of unemployment of the workforce may well prevail in the sector in question.[9]

2.2 Discussion

The stylized model as presented in Figure 1 provides a suitable framework for analyzing a number of important things about the process of development.

A. Education and demands of *full* development

By "full development", we shall mean that no one is directly left out of the *process* and

[7] There is the complication of the overtime pay, which in developed countries could be a significant mark-up on a standard wage. Although overtime pays may also be made into law in some developing countries, enforcement of them is often a problem. We shall abstract from this complication.

[8] One way to see this is to note that the supply side is about a stock—the skilled and unskilled workforce, while the demand side is about a flow—the amount of work to be delivered in each sector over a given period, translated into the equivalent number of workers needed according to some standard work schedule.

[9] Given our interpretations, naturally equilibrium labor supply points of the two sectors need not be vertically aligned with or without full employment in either sector.

fruits of development.[10] Specifically, we mean that the process of shifting workers from the unskilled to the skilled sector, which in our view is the essence of "development", must eventually encompass everyone in a society. This need not mean that everyone must eventually become skilled and do only skilled work. Even in an ideal situation, some may remain "unskilled" for various reasons, but all those who want to become skilled should have the opportunity to do so (this is the "process" part of the demands of full development). Moreover, even those who are not skilled can also enjoy the benefits of development. Specifically, they should enjoy more or less the same standards of well-being, which in our model means more or less same wages (this is the "fruits" part of the demands of full development).[11]

The key to "full development" in our model clearly rests with the expansion of education—indeed, a full expansion of education opportunities to everyone! We will discuss how this may be achieved (whether through a complete reliance on the market, or whether the state in fact has a role to play) later in Section 3. For now, let me only briefly note two other important effects of education (that is, other than turning an unskilled worker into a skilled one). First, past experience from regions like East Asia suggests that a well-educated workforce may well increase the demand for skilled workers as well. Indeed, part of the reason why some East Asian economies have enjoyed spectacular economic successes in the last several decades may exactly have to do with this factor, giving rise to a beneficial cycle of events. Secondly, vast amounts of research also indicate that education, especially female education, has an important downward impact on fertility, and upward impact on the quality of childhood upbringing. Both should have a clear effect on our model.[12]

B. Inequality and demands of *successful* development

The model turns out, in fact, also to capture the Kuznets-type inverse-U relationship between income inequality and growth nicely. If we imagine that at the beginning of the development process, all workers are unskilled and earn an unskilled wage (which is most likely to be the reservation wage), and that at the end of it all become skilled workers and earn a skilled wage, then through this process income inequality must first rise and then fall. Thus if we accept the characterization of the essence of a full development process as embodied in our model, then the Kuznets hypothesis is clearly right. The key point here is that it is about "full" development. Not all development processes may, however, be full. Some may become stuck during the course, with persistently high levels of inequality. It is not clear if these

[10] Indirectly, of course, no one can really be left out of any development taking place in his or her country or community.

[11] Note that our view of what development centrally involves conforms, by and large, to the human development perspective, which argues that the aim of development is to enlarge people's capabilities to live the lives they value, where basic capabilities are health, education and a decent standard of living. Our view of development may be considered as a reduced version of that, focusing as it does even more narrowly on education. Naturally, health is also important and may even be considered as prior to education, as we all must first be alive and healthy before we can effectively pursue education. For reasons of space limitations, we cannot address the issue of health. Note also that we have used the term "human capital", emphasizing as it does the "instrumental" role of education to the economy. Naturally, education also has its intrinsic value for many, as the human development view well stresses. See Sen (1999). Indeed, in the long run, we may expect such "intrinsic value" of education, rather than the monetary incentives associated with the related "human capital" investment, eventually to act as the main motivator for people's investment in education, as in our characterization of "full development", such monetary incentives may well disappear if both the unskilled and skilled earn more or less the same wage.

[12] By extending or shortening the distance of horizontal axis that measures the size of the full labor force, and in the absence of other changes, a low or high fertility rate can make a substantial impact on the rest of the economy (e.g. equilibrium wages, resources and incentives for investing in education, etc.). I will come back to some of these points later in Section 3.

economies are merely going through a “difficult” phase, but will soon see the light at the end of the tunnel, or whether they may indeed be stuck there indefinitely. One thing is clear, if they are going to come out the process “fully”, their income inequality must come down.

My above discussion may sound tautological: full development must be characterized by low income inequality at the end of process, and if an economy goes through the process fully, it must show a low level of income inequality. But it is not. For the key to bringing about full development as identified in our model is human capital accumulation. When all people in an economy are indeed well-educated and are skilled, there should exist no reason why income inequality must stay high. Much available empirical evidence stands in support of the conclusion that education is, indeed, a great equalizer for income distribution (as in respect of many other things).

While our model demonstrates that a Kuznets-type inverse-U trajectory of income inequality may indeed arise if the development process is fully completed (eventually all workers enjoy good and equal educational opportunities), the shape of this inverse-U trajectory is yet to be discussed. Much, in fact, will depend on how various factors play out over the course of development. And this opens up ample scope for policy intervention, both in the short- and long-run. A closer examination of the model shows that, within the terms of the model, the gap between the skilled and unskilled wage rates will determine the concavity of the inverse-U curve. Specifically, the greater is the gap over the course, the more concave the curve will be (and the greater is the height of the peak of the curve). Thus besides aiming to eventually give everyone an equal and good opportunity of education (which is what demands of “full development” is about), a government, if it also aims to manage development *successfully*, must also aim judiciously to keep the wage gap at low levels—indeed as low as possible, without compromising the incentives for agents to invest in education. We call this “demands of successful development”.

C. Poverty

What about poverty? Poverty is not immediately visible from our model. Indeed, whether in respect of absolute poverty or relative poverty, poverty cannot but be defined and measured in reference to some poverty-line level of income. Unless and until this line is specified, poverty remains undefined. Where might we find poverty in our model? The poverty line income could be defined to be just above the unskilled reservation wage rate (but definitely below the skilled reservation wage), in which case all those earning that wage (and this is likely to include everyone in the unskilled sector) are poor. Development in this case is tantamount to a process of poverty reduction. This, however, would appear to be too broad a definition of poverty.[13] Rather, we shall define it to include only those who are unemployed, in principle from both sectors but primarily or even exclusively from the unskilled sector.[14]

[13] While development must, of course, among its aims, tackle poverty, to limit the aim of development entirely to poverty elimination would appear to be too modest an ambition, and in any case would not seem to accord well with the general sense in which we understand poverty. Note that we have earlier defined the unskilled reservation wage to be equal to the “minimum cost of living” that would be necessary to ensure a person's continued survival and continued supply of labor. This could be seen as well in line with a threshold level of income for absolute poverty that would otherwise be defined. Thus while making only the unemployed the poor in our model, one should not forget the fact that even those employed unskilled workers are in fact just above poverty, and could easily fall into it should there be any shock to the economy (e.g. any leftward shift in the unskilled demand curve in our model).

[14] While unemployment can in principle happen to skilled workers in our model as well, as a rule we shall assume this not to happen—certainly not the long-term, structural kind of unemployment. To allow this to happen would be against the very

In Figure 1, an LN number of unskilled workers are unemployed and live in poverty. There are short term measures to combat this: anything that could increase job opportunities in this sector (that is, anything that can push out the unskilled demand curve) can reduce poverty. However, over the long-run, really the best approach to combating poverty is to invest in education, to move those who could otherwise end up unskilled (or who could otherwise stay unskilled) to the skilled category. Other things being equal, the more this happens, the less unemployment there can be from the unskilled sector, and the less poverty there will be.[15]

And once we consider a long-term approach to combating poverty that is based on education, other short term measures are immediately also opened up: anything that can push out the two demand curves for skilled and unskilled labor can make a contribution to long-run reductions in poverty. In the former case, a rise in the skilled equilibrium wage can increase incentives for private investment in education; in the latter case, an increase in the unskilled equilibrium wage can increase private resources available for such investment.

3. Role of the State and the Market in Development and Poverty Eradication

3.1 The Market, the State and the Vision

Our stylized model has postulates that development is essentially about human capital accumulation. In addition, it is argued that *full development* ought to require that all people in a society eventually enjoy the same opportunities of better education, and that s*uccessful development* should mean that development be managed in such a way that income inequalities are kept as low as possible without compromising people's incentives to invest in education. In the long-run, poverty is to be reduced and eradicated as part and parcel of this development process. These constitute, as it were, the long-run goals of development. That being so, the resulting strategy for development must center on human capital accumulation. In this section, we discuss how in our view such a strategy might work in respect of one market, the market for education, and the respective role of the market and state in it.

The economics literature—and the social science literature more generally—contain countless discussions of both market and state failures. Textbooks routinely offer rather stringent criteria for qualifications of a perfectly competitive market. Failure to meet any of these is said to result in a market failure. In practice, few markets, if any, satisfy these criteria. And where there is a market failure, the government concerned may be advised to take any one of the following courses of action: doing nothing (*laissez faire*); regulating and improving the functioning of the market in question (market strengthening); form partnerships with the market (public and private partnerships), or directly taking over some or all of the functions of the market (market substituting). Active public policy may involve any or all of the latter three courses, but exactly which would be the most *effective* course to pursue in terms of best improving on the existing allocations by the market and yet in a reasonably cost-effective manner is case-specific. Solutions that may improve on an existing market allocation but are highly costly are unlikely to be selected, and rightly so. And it has also been widely

spirit of the development process which we are postulating. Short-term, frictional skilled unemployment may well occur but in these cases we may expect the temporary unemployed to live on their savings and to stay above poverty.

[15] Needless to say, other things may not be equal, as some of our earlier remarks have pointed out.

recognized that, sometimes, a policy package with a set of coordinated and complementary measures to address failures in a number of different markets may be more effective than a single-pronged attack on any one of these failures.

But if these were the only ways to think about the role of the government and how it may intervene in a market, something fundamental would be missing. There must also be vision, leadership and strategic planning from the government! In contrast to the detailed job of allocation which a market may or may not do well given the circumstances (market conditions), vision, leadership and strategic planning are things which the market simply cannot provide. Markets are best at responding to the events *ex post*.[16]

This may sound like calling for going back to the days of central planning and state socialism, but to see it that way would be a mistake. First, some government planning, yes, but state socialism, no. Secondly, even when it comes to *planning*, it is to be based on a vision that all shall eventually receive an equal chance of best education, which it would seem to me is both far better ethically grounded and far less ambitious than the vision (if there was one) that guided past central planning under state socialism (there, people were supposed to live the lives that were planned for them).

The case for vision, planning and leadership is paramount. Market fundamentalists may view all this as gibberish. In their mind, why should a government have a vision anyway? Why shouldn't we leave things to the market, and accept whatever it delivers, for it may well be the best realistic outcome possible? However, to accept this view would be tantamount to condemning the vast number of the poor into perpetual poverty, for history has shown that markets, with their inevitable failures, simply cannot alone rid a country of poverty. If they could, they would have done it already! And *ad hoc* interventions in the normal functioning of the market cannot deliver the full and successful development which we have postulated either, for reasons just explained.[17]

3.2 Market for Education

Under a human capital accumulation-centered development strategy, the first most important area of policy concern, or what must constitute as the center piece of policy under this strategy, must relate to investment in education.[18] Such investment may be organized through the market, and in many parts of the world and to varying extents, this is indeed how such investment has been organized. In theory, if the capital market is perfect, if there are

[16] Indeed, even in the case of the futures markets, they operate only on the basis of *current* expectations of future events. But vision, leadership and strategic planning are precisely meant to change those expectations, and they are the things markets simply cannot and will not deliver.

[17] If we liken the market to a vehicle (it is after all a *mechanism*!) which could make the journey of development a little easier, to complete such a journey there must, of course, also be a destination and road map, which is precisely what the current literature on human development is about. By itself, the market is aimless, directionless and purposeless (why should it, after all?). This aim, direction and purpose has to be defined by the agents and beneficiaries of development themselves. The body that can most widely represent the views and interests of these agents and beneficiaries is, in my view, the government, for the government is in principle the natural public body whose job it is to provide such representation. It may fail to do so, but the market can hardly be a substitute for the state in providing this function.

[18] Strictly, there is also health, which is normally considered as another form of human capital. Indeed, it may even be considered as prior to education (as pointed out in a previous note), and may be considered as more directly related to poverty (we tend to think about a poor person's health first, before we think about his education). If we think about poverty only in the short term, this may well be right, but as this paper argues, in the long run, education provides a much surer way to eradicate poverty than a purely health-based strategy. What is really required is for an anti-poverty strategy to encompass both health and education. However, because of space limitation, I shall here only address education.

perfect foresights on future returns to education, and if there is also no externality involved in education, individuals should make both privately and socially optimal investment decisions. However, as has been well-recognized, externality in education does exist, and perfect foresights on future returns to education are simply not possible. So even privately optimal decisions made by (risk averse) individuals may not be socially optimal. Further, the capital markets may be seriously imperfect, especially in developing countries, such that even with good human capital investment opportunities, individuals may not be able to borrow against their future streams of income, unless they have adequate resources to offer the required collateral. This means that poor persons or families would, in the end, not be able to take advantage of such opportunities. But they are from our viewpoint precisely the people whom development must aim to encompass.

Given its key role and strategic importance in moving forward development, there is clearly a case here for active public policy in respect of education (doing nothing is simply not on!). Nothing is more important than a sustained adequate level of investment in education if one wants eventually to pull a country out of poverty and underdevelopment! Such action may take the form of any, or indeed all, of the three active courses of public action noted above. Thus efforts may be made to improve the working of the capital market when it comes to, e.g., offering student loans. Private and public resources may be combined to make investments on both the supply side to increase and improve educational facilities (schools, colleges, universities) and the quality of teaching, and on the demand side to provide scholarships, hardship allowances and other similar schemes to enable students from poorer families to avail themselves of the opportunity. Stand-alone direct public investments may also be made to supplement suboptimal private investments on both the demand and supply side. To ensure that such investments do not “crowd out” private investments, public investments may be used to target areas of education where private investment is particularly lacking, or those that need particular promotion for reasons of externality and, indeed, equity. One such case is universalizing basic education. In many developing countries, while some sections of the population are already enjoying fairly high levels of education, others are still left without even basic education. Receiving a basic education would be especially important for these people, if they are going to be part of the development process. With general improvements in educational levels across the world and, hopefully, in the country concerned, even though such basic education may not be enough to turn a person into a skilled worker, it may be a necessary qualification for him to become an unskilled worker. Ultimately, of course, full development should ensure all people an equal chance of receiving superior education.

But, as argued above, the role of the state should not be limited to making only such *ad hoc* interventions in the otherwise normal functioning of the market (where the market is in the driver’s seat, so to speak). The role of the state must, especially in this crucial area of development, include a vision, leadership, and strategic planning. Beyond this general call for the state to act so, in matters of education there is also an immediate practical imperative: it will take years to educate a skilled worker, and it is better to do so while he or she is still in the school and college years. So some forward planning must be done, if future demands for skilled workers are to be met (and if a skilled worker can indeed find a suitable job in the future).

But vision and planning should not be limited to only making sure that future needs for

skilled workers are to be properly met. After all, who could know for sure what the future needs may be? Vision, planning and leadership must also be about making things happen! Doing so is not about entertaining oneself with far-fetched ideas; it is about being farsighted, while remaining realistic. On matters of education, there is, in fact, the East Asian experience to guide us.

Recall the possible beneficial loop noted above about education (against the numerous vicious cycles that we know could lurk along the treacherous developmental path, this surely is one of the few beneficial ones one should lose no moments to seize on). It can not only supply a steady stream of skilled workers, but may also promote demand for these workers. This can especially be true today with mostly externally open economies, free trade regimes, and increased levels of international trade and FDI. With a well-educated skilled workforce, a country can produce goods and services not only for its own domestic market, but for the international market as well. So the demand for these goods and services can be rather elastic, and with it the demand curve for skilled labor can shift. In other words, increased supplies of skilled workers thanks to education may actually create their own demands for these workers (recall Say's law!). This is one part of the successful story of East Asia.[19]

But increased supplies of skilled labor may well do more. For reasons of reputation, industrial clustering and agglomeration effects (the ripples of which may now spread far and wide across the globe), the presence of a strong workforce of skilled workers may well help to create even more demands for the skilled than those that are met. This is another part of the story of East Asia.

So a human-capital accumulation-led development strategy could work, and past experience shows that it has worked in some parts of the world. But might the education market in fact rise to meet the challenge of its own accord, with any government involvement? The most realistic estimate is that, left to its own, the market will not. Note that among the key factors causing failures in this market is the lack of perfect foresights about the future by private agents. The reason has to do with information. Needless to say, no information can ever be perfect about the future in the sense of reducing all uncertainties. But more credible information from the government about its vision of the future, its specific aims and plans, and indeed a sense of strong leadership and commitment it conveys, can help private agents to make better and more intelligent decisions about the education of themselves or their sons and daughters (especially when it comes to having these households borrow for this education, possibly against their limited present wealth as well as their future streams of income). On the lenders' side, it should also help them to make better and more intelligent decisions about lending.

So a clear vision from the government with strong leadership and strategic planning on matters of education can even help the market to function better. But we should not kid ourselves by thinking that the state only needs to provide vision and planning, and leadership. Even with this improved functioning, it is extremely unlikely that the market can do all the necessary work alone. So there is a case for the government also to roll up its sleeves and do the hard work of delivering, in a way that compliments the private market. This could involve direct investment on both the demand and supply side. It could even form partnerships with the private sector in certain programs. And of course, it must regulate the private sector by

[19] On experience of East Asia in this and other areas, see Liu and Yin (2010) and the references therein.

monitoring the quality and standards of teaching, and strengthening the capital market as much as it could. This is the third part of the East Asian successful story.

As well as the experience from East Asia, more recently successful cases of public policy intervention that target education has also emerged from other parts of the world. Thus a cash transfer program has been operated in some Latin American countries which ties social relief (in the form of cash transfers) to a household's investment in the education of their children. Sure, the education involved is only basic education. However, as one plank of an attack on the lack of education among the poor, it has much to recommend itself, although issues about the quality of education received and other measures that are necessary to make an overall approach to attacking the problem remains to be further studied.

4. Conclusion

In this paper, we postulated that the essence of development lie with human capital accumulation, in particular education, both because education could provide a self-sustaining force for development, as experience from East Asia shows, and because it is essentially one of the few things which development should really be about. Poverty, in the long run, is to be tackled through education and development, although an anti-poverty program may have more immediate priorities in the short term. However, a human capital accumulation-centered development strategy could not entirely rely on the market. The state must have vision, leadership and strategic planning, as well as make other active interventions in the normal functioning of the market. The paper discussed in particular the case of the market for education, and find ample rooms for state action in this market, if the long run aim of full and successful development is to be achieved.

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