

UNIT 4

LEADING ISSUES IN SECTORAL DEVELOPMENT POLICY

Sectoral development policy is an important factor for the development of the whole economy. Since the sectors are interlinked, any policy undertaken for the development of a specific sector has impact on other sectors of the economy. Therefore, the policy makers must be careful when they design sectoral development policies. In this unit, you will learn the leading issues in the sectoral development policy. Lesson-1 of the unit is about agriculture and agricultural institutions. Lesson-2 explains the policies related to industrialisation. Lesson-3 is on trade and development. Lesson-4 is about micro finance. Lesson-5 discusses about health and population. Lesson-6 is about education. Finally, lesson-7 explains different concepts related to poverty.

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Lesson 1: Agriculture and Agricultural Institutions

Objectives:

Agriculture is a giant sector. In general the agricultural sector can be described with the help of markets: land, labour and credit market. The land market can open up, with plots rented out or sold from landowners to those with relative abundance of labour or other inputs of production. Alternatively the labour market can become active, with hired labour working on the larger plot of land. Let's look at the labour market's several contractual forms. The economic analysis of contract goes back to Marshall who showed that fixed-rent or share cropping (or metayage) is an inefficient contract.

After studying this lesson, you will be able to:

- Discuss about agricultural contracts between land lords and peasants;
- Understand the labour market and rural credit market; and
- Comprehend the political economy of land reform.

A Comparative Assessment of Tenural System¹

The simplest form of tenancy contract is **fixed-rent contract**, one in which the landlord charges a sum of money (per year or per season) for the rental of the land and, in turn, allows the tenant to carry out production. This sort of contract is found wherever land rentals are observed. A second type of contract is commonly referred to as **sharecropping**. Sharecropping comes in many forms, but all of them involve the sharing of the tenant's output in some pre-assigned proportion between the landlord and the tenant. The proportions vary from country to country and across regions within a country, although a 50-50 division is commonly observed. Variations on the sharecropping contract include different proportions of division of the output depending on whether input costs are also shared between the landlord and the tenant, and tied credit arrangements. The latter normally involve the advance of money by the landlord for the tenant's purchase of output (in addition to or in lieu of cost sharing).

There is a simple but useful way to write down a class of rental contracts that contains fixed rent and sharecropping contracts as special cases. If Y denotes agricultural output on the rented land, then write the total rent as

$$R = aY + F$$

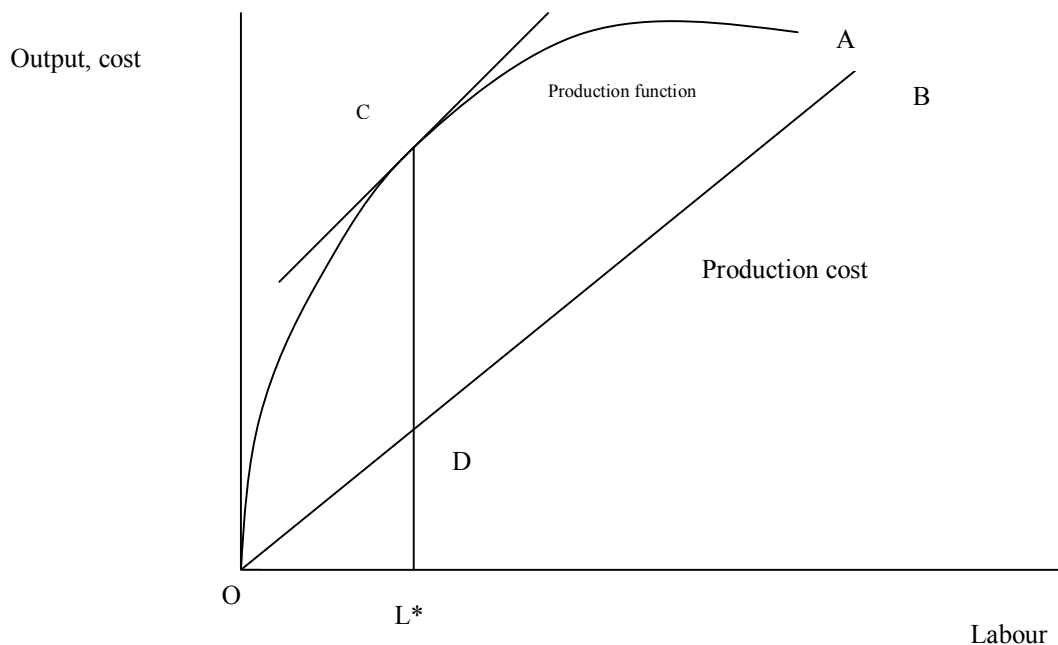
If $a = 0$ and $F > 0$, this is a **fixed-rent contract** with rent F . If $F = 0$ and a lies between 0 and 1, then this is a **sharecropping contract**, where the share to the landlord is a and the share to the tenant is $(1 - a)$.

Finally, if $a = 0$ and $F < 0$, this can be interpreted as a "**pure wage contract**," where the wage is simply $w = -F$: the tenant is not a tenant at all, but a labourer on the landlord's land.

¹Based on R. Devraj, *Development Economics*, Delhi: Oxford University Press, 1998.

There is long tradition in economics that sharecropping is essentially an inferior system to that of fixed tenancy. A clear statement can be found in Alfred Marshall's *Principles*. Because Marshall is closely connected with the assertion that sharecropping is an inferior contractual system, this argument is often referred to as Marshallian inefficiency. It is based fundamentally on the appropriate provision of incentives. A fixed-rent contract has the property that the tenant pays a fixed sum to the landlord no matter how much output is produced i.e. the tenant retains 100% of any extra output that is produced. In contrast, sharecropping effectively leaves the tenant with some fraction of any additional output—a percentage such as 50 or 60%, depending on the exact form of the contract. If the effort of the tenant cannot be monitored and controlled by the landlord, the tenant has an incentive to under supply his effort, since part of the output produced by him gets siphoned off to the land lord under the sharecropping contract. It would be better, instead, to extract this rent up front by charging a fixed payment and then leave the tenant alone.

We need a more careful statement of the Marshallian argument. Although the demonstration to follow is more general, it is easily described by assuming that the tenant has just one variable input of production—labour. In Figure, we plot the production function that relates output to labour applied on the rented plot of land, which is given by the curve OA. We also observe that labour is costly to the tenant. Labour does have other uses. For instance, part of the labour may be hired by the tenant for a wage. Even if this is not the case, the tenant could work as a labourer on somebody else's plot of land or he might have some land of his own on which he wishes to devote part of his labour. Another alternative (though this is less compelling in situations of excess labour supply) is that the tenant may simply value leisure. Whatever the reason, labour supply to the rented plot has a cost. The line OB depicts this cost.



This depiction makes it very clear just how much economic surplus is produced by the tenancy arrangement. The surplus is precisely the difference between the value of output and the cost of producing it; that is, the vertical gap between the curve OA and the line OB. The surplus will vary, of course, with the amount of labour being applied. We are interested in the labour input level that yields the maximum possible economic surplus. This is the point where the vertical difference between the curves OA and OB is at a maximum. In Figure this is attained by the labour input L. One characteristic of this point is that the value of the marginal product of labour, which is given by the tangent to the production function at this point, equals the unit opportunity cost of labour, given by the slope of the line OB. The surplus is given by the segment CD.

Now markets for certain input spring up when there is something imbalance in the ownership holding of those of inputs. Thus if land is very unequally held while endowments of labour are relatively equal, we would expect institutions to emerge that equalise the actual use of these endowments. Now, our view of the rural economy as characterised by agricultural use of labour and land is overly simplistic in a number of ways. The most of important of these can be lumped under a single heading: the existence of other agricultural inputs that might determine the functioning of the market for land and labour. For instance, a critical input is animal power. Then the ownership of bullocks becomes relevant. With this mental extension, we now have three sets of inputs: land, labour, and bullock power. Typically, the ownership of these three inputs will be distributed differently among the population. The use of input markets brings the ratios of these inputs into balance with one another, so that they can be used in an efficient way for cultivation. If one of these markets fails quite dramatically, the other two will have to compensate somehow. The rental market for animal power, which functions badly if it functions at all, is particularly vulnerable. There are two main reasons for this market failure:

- (1) rented animals may be overworked or otherwise mistreated, because the renter has no stake in these animals as a capital good and will therefore try to maximise current services and
- (2) animals are often used in time-bound operations, so that everybody in a village needs bullock power at the same time. Now if the bullock market fails, the other two inputs must kick in, and so it is not surprising to find that the operational distribution of land often follows the ownership distribution of bullocks.

Instead of land being leased from land-rich families to land-poor families, the opposite might happen. Families with sizeable bullock holdings will be in a position to lease land and hire labour. At this point yet another market must make an appearance. This is the market for **credit or capital**.

We can divide the demand for credit or capital into three parts, first, there is the capital required for new start ups or a substantial expansion of existing production lines. The credit market that services these needs is called the market for **fixed capital**: capital that is poured into the purchase and organisation of fixed inputs such as factories, production processes, machines, or warehouses. In contrast, there is the credit required for ongoing production activity, which occurs because of a substantial lag between the outlays required for normal production and sales receipts. Thus, merchants who buy handicrafts from poor producers advance or "put out" sums of money that are used to purchase various materials. When the product is finally produced, these credit advances are deducted from the price that the merchant pays for his wares. This market is called the market for working capital. Finally, there is consumption credit, which typically is demanded by poor individuals who are strapped for cash, either because of a sudden downturn in their production, or a sudden fall in the price of what they sell, or perhaps because of an increase in their consumption needs caused by illness, death, or festivities such as a wedding.

Some Characteristics of Rural Credit Markets

As in the case of any commodity, there would be a demand curve for credit and a corresponding supply curve of credit, and the intersection of the curves would determine the volume of credit and its equilibrium "price" as well, which is simply the interest rate. There would be little else to write about. Unfortunately, rural credit markets are pretty far removed from perfect competition.

Informational Constraints

The fundamental feature that creates imperfections in credit markets is informational constraints. Informational gaps occur at two basic levels. First, there is lack of information regarding the use to which a loan will be put. Second, there is lack of information regarding the repayment decision. This deficiency includes limited knowledge of the innate characteristics of the borrower that may be relevant in such a decision, as well as limited knowledge of the defaulter's subsequent needs and activities, which place limits on his incentive to default. All the important features of credit markets can be understood as responses to one or the other of these informational problems.

Segmentation

A characteristic of the rural credit market is its tendency toward segmentation. Many credit relationships are personalised and take time to build up. Typically, a rural moneylender serves a fixed clientele, whose members he lends to on a repeated basis; he is extremely reluctant to lend outside this circle. Most often, a moneylender's clients are from within his village or from close by, so that the moneylender has close contact with them and is well informed about their activities and whereabouts. Repeat lending-a phenomenon in which a moneylender lends funds to individuals to whom he has lent before {or has otherwise

close interactions with)-is very common. To take an example, consider Aleem's [1993] intensive survey of fourteen moneylenders in the Chambar region of Pakistan. This survey showed that as many as ten moneylenders lent more than 75% of their funds to old clients-those with whom they had dealt in the past. Even among the remaining four lenders, the lowest percentage of repeat lending "as reported to be 52%. You have already seen similar observations in the case of Thailand.

Interlinkage

A third feature, which may be considered an extension of the second, is the existence of what we might describe as interlinked credit transactions. Indeed, this is a good time to banish from your mind the image of a crafty money lender, whose sole purpose is to lend money at exorbitant rates of interest to hapless borrowers. A majority of village moneylenders do not pursue usury as their sole occupation. Most of them are also wealthy landlords, shopkeepers, or traders dealing in the marketing of crops. Given a segmented market, it probably won't come as a surprise to learn that landlords tend to give credit mostly to their tenants or farm workers, whereas traders favour lending to clients from whom they also purchase grain. Thus segmentation often takes place along occupational lines, and the complementarity of some production relationship (tenant and landlord or farmer and trader) facilitates the credit relationship. This interlocking of markets-people who conduct their business in different markets (land, labour, credit, etc.) with the same trading partners, and indeed make the terms of transaction in one market depend on the terms and conditions.

Interest Rate Variation

Segmentation has a natural corollary: informal interest rates on loans exhibit great variation, and the rates vary by geographical location, the source of funds, and the characteristics of the borrower. Sometimes the rate of interest is extraordinarily high. Aleem's survey of the Chambar region of Pakistan showed that the average annual interest rate was as high as 78.7% and involved substantial dispersion. The rate in specific cases varied from a low of 18% (which is nevertheless higher than the 12% charged by formal sector banks)

Rationing

Informal credit markets are characterized by widespread rationing; that is upper limits on how much a borrower receives from a lender. At first sight this appears natural: why would any moneylender advance infinite quantities of money? However, note that by rationing, we mean that at the going rate of interest, the borrower would like to borrow more but cannot. In this credit rationing is a puzzle: if the borrower would like to borrow strictly more than what he gets, there is some surplus here that the moneylender can grab by simply raising the rate of interest a wee bit more. This process should continue until the price (interest rate) is such that the borrower is borrowing just what he wants at that rate of interest. So why does rationing in this sense persist?

Note that, as a special case, rationing includes the complete exclusion of some potential borrowers from credit transactions with some lenders. That is, at the going terms offered by the lenders, some borrowers would like to borrow, but the lender does not lend to them. In this sense rationing is intimately connected to the notion of segmentation.

Exclusivity

Finally, many informal credit transactions are characterized by exclusive dealings. Moneylenders typically dislike situations in which their borrowers are borrowing from more than a single source. They insist that the borrower deal with them exclusively; that is, approach no other lender for supplementary loans. In Aleem's survey, for example, when asked whether lenders are prepared to lend to farmers who also borrow from other sources, ten of the fourteen respondents replied in the negative.

Land Markets in South Asia: What Have We Learned?²

Faruqee and Carey (1997) reviewed the literature on land markets in South Asia and summarized what they have

learned and highlighted the major unresolved issues.

- There is a good understanding of why sharecropping persists and why it can be superior to other standard agricultural contracts. There are less understanding of the determinants of the relative efficiency of sharecropping in different environments, and of why other apparently superior contractual forms are rarely observed.
- Theory and evidence from elsewhere suggests that insecure rights to land adversely affect production and investment incentives. However, strong evidence linking rights to production and investment is scarce for South Asia despite significant regional variation within the subcontinent.
- The existence of an inverse relationship between farm size and output per unit area is a recurrent feature in data from South Asia. The source of this relationship appears to lie in land-labour interactions.
- Despite their greater apparent efficiency, small farmers face great difficulty in raising their profitability or expanding their holding size. Credit constraints appear to be the biggest single obstacle but a discriminatory policy regime and poverty have also played a major role.
- Past misguided land reforms have made tenancy unattractive to landowners, leading to the development of large capital-intensive farms. A political economy approach is essential for understanding the failure of land reform efforts and distortions in agricultural input and output markets in South Asia.

² Faruqee, Rashid and Kevin Carey, "Land Markets in South Asia: What Have We Learned?" World Bank, January 21, 1997

- Land fragmentation, as distinguished from farm size, is a source of productivity loss, but these losses have not been quantified, and reasons for the persistence of fragmentation are poorly understood.
- Transaction costs are a significant impediment to the functioning of land markets. Transfers of land rights are complicated in South Asian land markets by lack of explicit title to land, and informal and customary rights.
- Land market imperfections have an important gender dimension. Particularly important is the separation of management of land from control of land within the household. A greater understanding of these issues is a pressing research problem.

Land Reform

The structure of land ownership in many developing countries is severely concentrated. It is argued that a redistribution of land is desirable on equity as well as efficiency grounds. While there is no doubt that land reform or simply a redistribution involving subdivision of land improves equity it is argued that it is not clear if it improves efficiency. Although some authors categorically claim that land reform may be necessary condition for increased productivity in agriculture, they realise that it is not sufficient in the sense that a general agricultural reform is necessary, complementing land redistribution with provision of credit, crop insurance, inputs, know-how, transport facilities, etc. Many countries have adopted land reform: some have successfully increased output; others have not. Agricultural output, on the other hand, has been successfully increased through technical change without land reform which tends to suggest that land reform is not even necessary.

Land reforms in Asia: Lessons from the past³

The economic case in favour of redistributive reform is today almost ironclad (Putzel, 2000). In situations of capital scarcity and labour surplus there is an inverse relationship between the size of farm and the productivity of land and labour in agriculture (Berry and Cline, 1979 and Besley and Burgess, nd).⁴ Even in high value crops, long thought to be most efficiently farmed through modern plantation arrangements, there is evidence that with the proper support productivity can be matched or surpassed by small contract growers (Hayami et al, 1990).⁵ Many agribusiness companies have begun to realise that their comparative advantage lies in processing and marketing rather than managing on-farm production and they have opted for small grower and contract schemes.

³ Putzel, James (2000): Land reforms in Asia: Lessons from the past for the 21st century, LSE DESTIN Working Paper No. 4

⁴ Berry, A. and W. Cline, *Agrarian Structure and Productivity in Developing Countries* (Geneva: International Labour Organisation, 1979). Besley, Tim and Robin Burgess, 'Land Reform, Poverty Reduction and Growth: Evidence from India' mimeo, London School of Economics.

⁵ Hayami, Y., A. Quisumbing and L. Adriano, *Toward an Alternative Land Reform Paradigm: A Philippine Perspective* (Quezon City: Ateneo de Manila University Press, 1990).

Putzel (2000) argues that opposition to redistributive reform on the basis of arguments about population density on the land or the irrelevance of reform to the plight of landless labourers does not disprove the case for reform but only underlines why a redistributive agrarian reform programme must be part of a wider development strategy.

While the economic case for reform appears solid, Putzel adds that the political dimensions of redistributive reform in the Asian development experience have been at least as important. There is a strong case to be made that it was the redistributive reforms of Northeast Asia and the socialist countries that underpinned long periods of social and political stability through the legitimacy accorded to states whose authoritarian governments might well have not achieved legitimacy otherwise. Redistributive reforms in the capitalist economies of Northeast Asia contributed to fundamental institutional transformation in these countries allowing political coalitions that were apparently more conducive to development than in many other parts of the developing world to consolidate and maintain power for decades. According to him, it was also largely for political reasons that the Western development community purged redistributive reform from their lexicon of development policy.

As professional economists relearn the lesson that poverty need not accompany growth and that growth and redistribution are not incompatible, redistributive agrarian reforms have regained credibility. There is a greater openness toward land and agrarian reform among the international development agencies. New political coalitions are possible in this context, particularly since the transformation of agricultural production has meant that landownership and capturing land rent is less important than it once was to the accumulation of wealth.

Technical Change in Agriculture

Although the farm size productivity argument lends support to the case for small farms, it is argued that it is neither necessary nor sufficient that a policy of land distribution will increase agricultural productivity. According to this perspective, it is not sufficient because some countries using the rationale have experienced a fall in agricultural output. They argue that it is not necessary because technical change in agriculture can bring about an increase in the output of farm products.

Historically, rapid population growth and increased demand for food has led to an increase in food supply through, which is referred to, 'induced innovation,' especially in the West. This type of capital-intensive innovation is not, however, very useful for LDCs. What is more appropriate for LDCs, as suggested, is increased yield without necessarily increasing capital intensity i.e. through technical change, what usually referred to as green revolution.

Changing farming practice requires abandoning some of the traditional ways of production and adopting new methods and requires a limited provision of know-how on the on the part of the government for simple

reason that usually a specific seed requires a specific fertiliser in a given proportion. The timing of fertiliser application is also crucial and often farmers with low levels of education cannot apply the 'package.'

The riskiness of adopting modern varieties, as has been argued, leads to large farmers adopting them first and hence, in general, benefiting more from this technology which worsens income distribution in rural areas. These arguments have criticised on the grounds that (a) large holdings are usually farmed as a number of small plots, and (b) empirical evidence shows that diffusion of modern varieties was fastest in farms of five to 20 acres.

A number of additional points are noteworthy. The environmental impact of the green revolution is an important concern due to increased use of fertilisers. It is argued that land prices go up in areas where adoption is widespread which resulted in eviction of tenants, leading to landlessness.

There seems to be a case for public policy aimed at the following:

- provision of farmer education to help farmers use inputs correctly and efficiently
- provision of complementary inputs
- subsidisation of poor farmers' purchase of inputs
- provision of credit, credit subsidies and crop insurance
- correction of the very common 'cheap food policy' – often designed to subsidise urban consumers – which reduces production incentives
- use of progressive income taxes to finance some of the above expenditure.

Review Questions

Multiple choice questions

1. What is the feature of the fixed-rent contract?
 - A. Landlord charges a sum of money
 - B. Landlord shares the tenant's output
 - C. Landlord supplies the inputs
 - D. Tenant is not independent in making production decision
2. What is the inevitable outcome of land reform?
 - A. Equity in the society is improved
 - B. Efficiency in production is enhanced
 - C. Scope of using high-tech machines is increased
 - D. None of the above
3. Output shirking may happen in -
 - A. Fixed rent contract
 - B. Sharecropping contract
 - C. Fixed wage contract
 - D. None of the above

Answers: 1. A; 2. E and 3. B,C

Short questions

1. What is the difference between fixed-rent contract and sharecropping contract?
2. Write some characteristics of rural credit market?

Essay-type questions

1. "A development strategy which ignores the agriculture sector will fall." Discuss.
2. "Land reform is necessary for agricultural development." Discuss.
3. Consider the reasons for introduction of new technology in the agricultural sector in LDCs and examine the outcome of that strategy.
4. Describe the land markets in to explain the equity and efficiency issues.
5. Elaborate on the nature of sharecropping and other agricultural contracts.
6. Explain the rural credit markets and its impact on the development of agriculture.

Further Readings

1. Adams, D. W. and Graham, D. H. (1981) 'A Critique of Traditional Agricultural Credit Project and Policies', *Journal of Development Economics*, vol 8: 347-366.
2. Bardhan, P.(1975),*Land, Labour and Rural Poverty*. Cambridge: Cambridge University Press.
3. Chenery, H.B. and Syrquin, M. (1975) *Patterns of Development, 1950-1970*. London: Oxford University Press.
4. Schultz, T. W.(1978) *Distortions of Agricultural Incentives*. Bloomington, IN: Indiana University Press.
5. Streenten, P.(1986) *What Prices Food?* Washington D.C.: Economic Development Institute of the World Bank.

Lesson 2: Industrialisation

Objectives:

After studying this lesson, you will be able to:

- Understand the labour intensive and capital intensive industrialisation
- Grasp the importance of export led and import substitution industrialisation in the context of a developing country's growth path.

Introduction

The extensive development of organised economic activity for the purpose of manufacture is known as industrialisation; it is characterised by transformation of a primarily agrarian economy into a more specialised, capital intensive economy. Such a transformation was termed as the industrial revolution in Western Europe and North America during the 18th and 19th century.

Industrialisation

The initial development of any LDC generally focuses on the industrialisation; it is not the question of concentrating resources on industry or agriculture rather it is the mutual supportive interactions between these two sectors. Though the process of industrialisation contains the transformation of a traditional sector to a modern sector, the question is how to achieve concurrently both agricultural and industrial development. So industrialisation strategy should give as much weight to the country's ability to reallocate the resources effectively as it does to the resource mobilisation. A country's industrialisation depends on the available resources and the factor intensities in which this country may have comparative factor productivity.

The factor intensity used in the production of a commodity is defined in the ratio of two inputs capital(k) and labour(L) used in producing the unit level output of a good., at any given input price ratio (w/r). It refers to the proportions in which factor inputs are combined in the production process. When (K/L) ratio used in producing one unit of X_1 exceeds the (K/L) ratio used in producing the one unit of X_2 , we say that X_1 is relatively capital intensive good while X_2 is relatively labour intensive good. The figure 1 shows this:

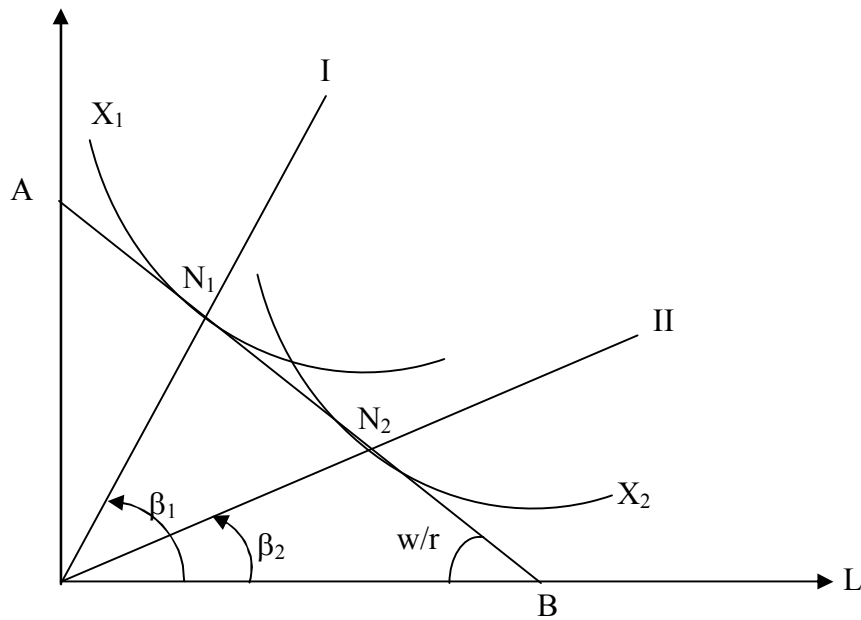


Figure 1

Let w be the wage rate and r be the rental rate. To the firms producing X_1 and X_2 the wage and rental rate are assumed to be given and constant. The slope of the line AB defines the ratio (w/r) . N_1 & N_2 are the least cost input combination points for producing the two outputs (X_1 & X_2). The capital labour ratio used in the production function of X_1 & X_2 are given by the slopes of the two rays OI and OII ; with β_1 greater than β_2 , X_1 is relatively capital intensive and X_2 is labour intensive.

The resource allocation associated with the factor intensities and comparative factor productivity drives a country to model the structural transformation, eventually, industrialisation. The task of modelling can be divided into two parts:⁶ rate of growth and changes in the economic structure. The complementary effect of these two tasks in the production process associated to the increase in the production is equated to the following factors:

Expansion of the Domestic Demand which includes the direct demand for the commodity produced in a particular sector plus the indirect effect on that sector.

Export Expansion or the total effect on output from that sector of increasing exports.

Import Substitution or the total effect on output from that sector of increasing the proportion of demand in each sector that is supplied from domestic production.

⁶ From Hollis B. Chenery, 'Industrialisation and Growth: Alternative views of East Asia', *Development Discussion Paper*, No 217, Harvard Institute for International Development, January 1986, pp 13-21.

Technology Change or the total effect on that sector of changing input-output coefficients throughout the economy as wages and income level rises.

Import Substitution⁷

Import substitution is a strategy pursued by a developing country as means of promoting domestic industrialisation and conserving scarce foreign exchange resources; the country initially can be expanded to supply the domestic market, and later to develop an export trade. The production of consumer goods in substitution for imports has had considerable impact as the dominant strategy of industrialisation. Given an existing demand for imported consumer goods the rationale for industrialisation on the home replacement of the finished goods allows the home replacement of an existing market. Although the widespread pursuit of import substitution is based mainly on the objectives of industrialisation and balance-of-payments support. Proponents of industrial protectionism have adduced several special arguments in the context of development-arguments that should be considered more seriously than the usual simple assertions about a "natural" inferiority of agriculture or the supposed necessity of Industrialisation to achieve a rising level of income.

Historical studies of some countries show not only that the share of industrial output rises with development, but also that the growth of industries based on import substitution accounts for a large proportion of the total rise in industry. It is also true that "much of the recent economic history of some rapidly developing underdeveloped countries can be written in terms of industrialisation working its way backward from the 'final touches' stage to domestic production of intermediate, and finally to that of basic, industrial materials." At first, the country may import semifinished materials and perform domestically the "final touches" of converting or assembling the almost-finished industrial imports into final products. Later on, with the growth in demand for the final product, a point may be reached at which the import demand for intermediate components and basic goods is sufficiently high to warrant investment in their production at home; the market has become sufficiently large to reach a domestic production threshold.

The historical evidence on the contribution of import substitution to industrialisation applies to only some countries; in other countries, the replacement of imports was not significant. Moreover, the rise of industry through import replacement was due in large part to systematic changes in supply conditions, not simply to a change in the composition of demand with rising income. The changes in factor supply-especially the growth in capital stock per worker and the increase in education and skills of all kinds-were instrumental in causing a systematic shift in comparative advantage as per capita income rose. But for a presently underdeveloped country, there is no reason to expect that a tariff on

⁷ Based on Gerald M. Meier., *Leading Issues in Economic Development*, Delhi: Oxford University Press, 1990.

industrial imports would cause the supplies of capital, human skills, and natural resources to change in a way that would favour the substitution of domestic production for imports. The changes in supply conditions that occurred in other countries cannot now be duplicated simply by a policy of industrial protection.

For the objective of replacing imports with domestic production, it would thus be self-defeating to restrict imports at too early a stage and thereby forgo the awakening and inducing effects that imports have on industrialisation. An increase in imports-not their restriction-is the effective way to prepare the ground for the eventual creation of an import-replacing industry. Only after the domestic industry has been established can the country afford to dispense with the "creative" role played by imports, and only then would there be a case for protection of the domestic industry.

Another special argument for industrialisation via import substitution rests on the contention that a peripheral country's demand for industrial imports increases much more rapidly than does the foreign demand for its exports, so that the country must supply all those industrial products that cannot be imported in view of the relatively slow growth of its exports. Moreover, the elasticity of demand for a commodity may be low on world markets, it may be high for the commodity from a particular source of supply. Nor can the future demand of industrial countries for imports be inferred simply from their income elasticity of demand for imports. Their import requirements will also depend on their growth rates in income (a high growth rate may offset a low income elasticity of demand), on shifts of the long-term supply elasticities within the industrial countries (domestic output of certain minerals and fuels, for example, has not kept pace with demand, so that import requirements are rising relatively to income growth), and on the degree of liberalisation in the importing countries' commercial policies.

A worsening of the export situation may occur when the country's scarce financial and human resources are concentrated on industrialisation, resources are diverted from the export sector, home consumption limits the available export supply, or the Industrialisation program is inflationary .A developing country's capacity to import industrial products will depend not only on its export earnings, but also on the inflow of foreign capital, changes in the terms of trade, and the capacity to replace other imports (such as foodstuffs and raw materials) with domestic production.

Another facet of the argument for replacing industrial imports with domestic production is related to the objective of expanding employment outside of agriculture. The promotion of new employment opportunities is certainly a crucial component of development programming, and in this connection there is considerable point to the emphasis on industrialisation. The relevant questions here, however, are whether investment should be directed toward import-replacing industries, and whether industrial protectionism is the most appropriate policy for facilitating the expansion of non-agricultural employment. A more

sophisticated version of the employment argument is that industry should be protected by a tariff in order to offset the effects of an excessively high wage rate for labour in the importable manufacturing industries.

Although we have so far been skeptical about the validity of protectionist arguments for import substitution, there remain two arguments that have more merit: the infant industry case, and the attraction of foreign investment argument. A tariff could make the foreign and domestic rates of transformation equal, but it destroys the equality between the domestic rate of substitution and the foreign rate of transformation. Although it is possible that a nation may succeed in improving its terms of trade by switching production from exportables to import substitution, this policy has little practical relevance for poor countries that cannot exercise sufficient monopoly or monopsony power in foreign trade.

Finally, when the social rate of return exceeds the private, the preferable policy, in a way analogous to the other cases of domestic distortions, would be a direct subsidy on facilities to further the "learning process" of new production methods, or provisions by the government for the training of labour. These subsidies are superior to a protective tariff, since they avoid the intermediate loss to consumption that occurs with protection. Protection may, however, be an effective policy for fostering an import-replacing industry when its successful establishment depends on the acquisition of better technical knowledge and experience. For when the country imposes prohibitive tariffs, or other import restrictions, against foreign manufactures, the foreign manufacturer may be induced to escape the import controls against its product by establishing a branch plant or subsidiary behind the tariff wall.

After a period of import-substitution industrialisation, the problems of maldistribution of income and unemployment have also become more serious than they were in the first place. The use of subsidies, overvalued exchange rates, the rationing of underpriced import licenses, high levels of effective protection, and loans at negative real interest rates have induced the production of import substitutes by capital-intensive, labour-saving methods and have resulted in industrial profits in the sheltered sector and high industrial wages for a labour elite, aggravating inequalities in income distribution.

Export Substitution

Export led growth is an expansion of the economy with export serving as a leading sector. As export rises they inject additional income into the domestic economy and increase total demand for domestically produced output. The increase in exports also enables a higher level of import absorption to be accommodated so that there is no balance of payments constraint on achievement of sustained economic growth. In contrast with Industrialisation via import substitution, there is an increasing interest in the potentialities of an Industrialisation strategy that emphasises export substitution. "Export substitution" is the export of non-traditional products, such as processed primary products, semi

manufactures, and manufactured goods, rather than the traditional export of primary products.

It might be thought that in terms of relaxing a country's foreign-exchange constraint, a unit of foreign exchange saved by import substitution is equivalent to a unit of foreign exchange earned by export substitution. But there are other indirect effects and dynamic considerations in favour of export substitution. First, the domestic resource cost of earning a unit of foreign exchange tends to be less than the domestic resource cost of saving a unit of foreign exchange. This means that the resources used in import substitution could have earned a greater amount of foreign exchange through export expansion than the foreign exchange saved in import substitution, which relies on high effective rates of protection. Even though the import substitution is profitable in local currency because of the high protection, the economic costs in terms of real resource used is excessive. Moreover, to the extent that it rests on exogenous world demand; the process of industrialisation through export substitution is not limited to the narrow domestic market, as is the import-substitution process.

A developing economy must overcome the diseconomies of small size. And as classical economists have emphasised, "the division of labour is limited by the extent of the market." If a country can export to a world market, it can enjoy economies of scale, learning effects, and the competitive gains of X-efficiency.

Export substitution contributes more than does import substitution to the objectives of greater employment and improvement in the distribution of income. Being labour intensive in production technique and dependent on the demand of worldwide markets, the nontraditional exports may absorb more labour than import replacement.

The evidence from the past three decades does show that the range of labour-intensive manufactures exported from LDCs has indeed widened, and the number of LDCs engaged in export substitution has increased. The evidence also indicates that export growth rates explain a significant portion of the variance in income growth rates, which cannot be explained by the growth in primary inputs; that generally the greatest increase in the GNP of various LDCs is better correlated with exports than with any other variables; that the higher income LDCs have a higher ratio of exports to GDP and a faster rate of growth; and that the higher rate of growth is correlated with a more diversified export base.

Export-oriented industrialisation has led to superior development performance in a number of countries, of which the East Asian NICS are prime examples. By undertaking policies that remove the bias against exports and make it as profitable to produce for export as for the domestic market, these countries achieved dynamic gains from trade. They overcame the diseconomies of being small countries and realised dynamic efficiency in their mobilisation and allocation of resources.

To the extent that export substitution rests on foreign investment by vertically integrated transitional firms, it has been criticised by economists as constituting only "shallow development." The basic attraction offered by developing countries to such export activities by transnational firms is obviously due to the very low wages of unskilled labour in such countries given minimum productivity rates. Their comparative advantage in this case rests in specialising in unskilled labour whose wages have to stay comparatively low while importing a package of inputs from abroad. Since skills and technology, capital, components and other goods are mobile internationally while unskilled labour is not transnational. The "shallowness" of such a development process mainly happens because the type of labour utilised represents generally the weakest and less organised part of the labour class, thus limiting possibilities for increasing labour returns unless a general shortage of labour takes place in the country, in which case opportunity cost considerations arise for the host economy. On the other hand the concentration on low wage, unskilled-labour-intensive, export promoting activities has been compared to the older enclave structures in the extractive industry.

Review Questions:

Multiple Choice Questions:

1. Industrial revolution happened in –
 - A. 18th and 19th century
 - B. 16th and 17th century
 - C. 19th and 20th century
 - D. 17th and 18th century
2. Industrialisation is a transformation of –
 - A. Agrarian economy to more capital intensive economy
 - B. Capital intensive economy to agrarian economy
 - C. Socialist economy to capitalist economy
 - D. None of the above

Answers: 1. A and 2. A

Short Questions:

1. What are the main features of industrialisation?
2. What is main reason behind the import substitution industrialisation?
3. What are the advantages and disadvantages of export substitution?

Essay-type Questions:

1. “Theory suggests that export promotion is a preferable strategy to import substitution and evidence support this view.” Discuss.
2. What are the main features and effects of an industrialisation based on protection from imports?
3. Explain rationale and policy characteristics of labour-intensive and capital intensive industrialisation.

Further Readings:

1. B. Balasa, *The Structure of Protection in Developing Countries* (1971)
2. I.M.D. Little, T. Scitovosky, and M.FG Scott, *Industry and Trade in Some Developing Countries* (1970), Chapter 2&3.
3. I.M.D. Little, ‘Import Controls and Exports in Developing Countries’, *Finance & Development* (September 1970)
4. G. K. Helleiner, ‘Manufacturing for Export, Multinational Firms and Economic Development’, *World Development* (July 1973): 17.
5. V. Vaitos, ‘Employment Effects of Foreign Direct Investments’, in *Employment in Developing Nations*, ed. Edgar O. Edwards (1974), pp- 339-41.
6. Atkinson, A. B. and Stiglitz, J. E. ‘A new View of Technological change’, *Economic Journal*, 79: 573-578, (1969)
7. Bruton, H.J. ‘A Note on the Transfer of Technology’, *Economic Development and Cultural Change*, 25(supplement): 234-244, (1977).
8. Williamson, J. G. ‘Relative Price Changes, Adjustment dynamics, and Labour Absorption Once More’, *Quarterly Journal of Economics*, 85:40-65, (1971a).

Lesson 3: Trade and Development

Objectives:

The conventional view based on the theory of comparative advantage is that trade leads to growth and hence to improvements in the standard of living. However, there has been considerable disagreement about this and concerns regarding the possible outcome of free trade.

After studying this lesson, you will be able to:

- Why free trade better than autarky.
- Explain in what circumstances protection might be preferred.
- Describe the additional problems that might lead us to believe that free trade is not appropriate.

Introduction

The main benefits of unrestricted foreign trade stem from the increased access of their producers to larger, international markets. For a national economy that access means an opportunity to benefit from the international division of labour, on the one hand, and the need to face stronger competition in world markets, on the other. Domestic producers produce more efficiently due to their international specialization and the pressure that comes from foreign competition, and consumers enjoy a wider variety of domestic and imported goods at lower prices.

In addition, an actively trading country benefits from the new technologies that "spill over" to it from its trading partners, such as through the knowledge embedded in imported production equipment. These technological spillovers are particularly important for developing countries because they give them a chance to catch up more quickly with the developed countries in terms of productivity. Former centrally planned economies, which missed out on many of the benefits of global trade because of their politically imposed isolation from market economies, today aspire to tap into these benefits by reintegrating with the global trading system.

But active participation in international trade also entails risks, particularly those associated with the strong competition in international markets. For example, a country runs the risk that some of its industries—those that are less competitive and adaptable—will be forced out of business. Meanwhile, reliance on foreign suppliers may be considered unacceptable when it comes to industries with a significant role in national security. For example, many governments are determined to ensure the so-called food security of their countries, in case food imports are cut off during a war.

In addition, governments of developing countries often argue that recently established industries require temporary protection until they become more competitive and less vulnerable to foreign competition.

Thus governments often prohibit or reduce selected imports by introducing quotas, or make imports more expensive and less competitive by imposing tariffs. Such protectionist policies can be economically dangerous because they allow domestic producers to continue producing less efficiently and eventually lead to economic stagnation. Wherever possible, increasing the economic efficiency and international competitiveness of key industries should be considered as an alternative to protectionist policies.

A country that attempts to produce almost everything it needs domestically deprives itself of the enormous economic benefits of international specialization. But narrow international specialization, which makes a country dependent on exports of one or a few goods, can also be risky because of the possibility of sudden unfavourable changes in demand from world markets. Such changes can significantly worsen a country's terms of trade. Thus some diversification of production and exports can be prudent even if it entails a temporary decrease in trade. Every country has to find the right place in the international division of labour based on its comparative advantages.

The costs and benefits of international trade also depend on factors such as the size of a country's domestic market, its natural resource endowment, and its location. For instance, countries with large domestic markets generally trade less. At the same time, countries that are well endowed with a few natural resources, such as oil, tend to trade more. Think of examples of countries whose geographic location is particularly favourable or unfavourable for their participation in global trade.

Trade and development: theory⁸

The early literature on trade and development stressed three separate kinds of potential or actual gains from trade in developing countries: those relating to static comparative advantage, those associated with increased capacity utilisation and those relating to productivity growth. The *dynamic effects*⁹ of trade on overall economic growth must be done through examining the precise channels that trade may affect growth.

$$Y^{\wedge} = \text{weighted average } (T^{\wedge} + \text{inputs}^{\wedge})$$

From this equation it can be inferred that the rate of output growth must be determined by the growth of inputs and through technical progress (T).

⁸Based on G. Helleiner, 'Trade, Trade Policy and Economic Development', *The Bangladesh Development Studies*, Vol XX, June-September 1992, Nos "

⁹ K. Pari (1995), *Development Economics*, South-Western college Publishing.

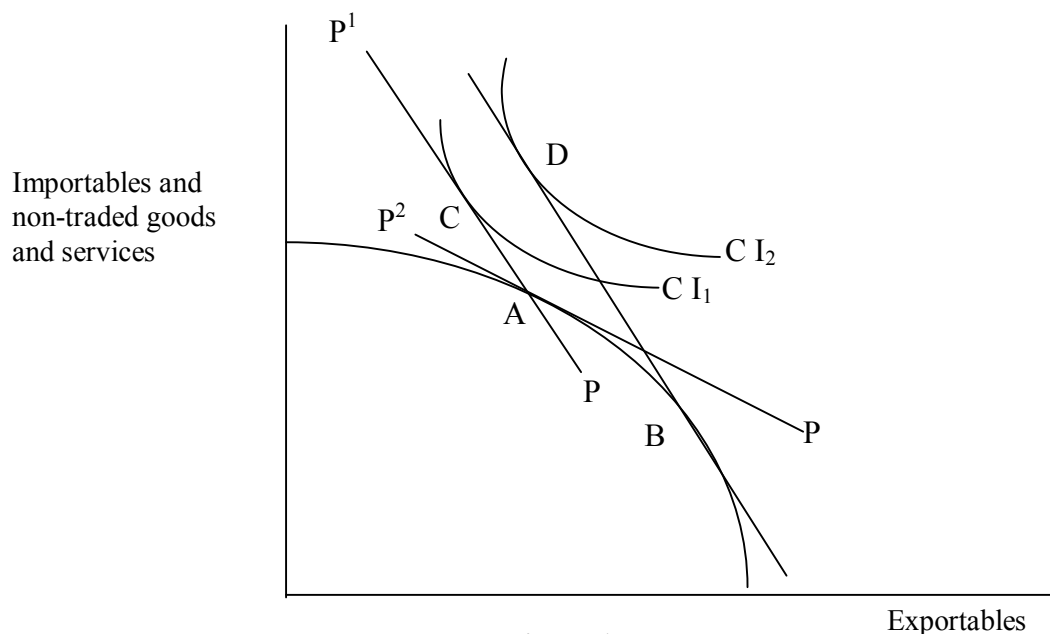


Figure-1

The separation of production from consumption, and the utilisation of comparative advantage is allowed by the exchange. In Figure 1, this is depicted as a shift in production from a low-trade point on the production frontier, such as A, to a more outward-oriented point, involving greater exportable output B. Assume that the country is too small to influence world prices that prices (which are represented by the slope of line P_1P) accurately reflect social benefits and costs, and that social welfare can be represented by a map of non-intersecting indifference curves; national gains can be shown in terms of a shift in consumption from C to D, from community indifference curve, CI_1 , to CI_2 . Further gains from trade should not be expected beyond this point.

If the policy has discouraged export production, for instance, by taxation and other disincentives such as to generate a domestic price structure (as shown by the slope of P_2P) which is less favourable to exports than the international one, the gain from increased trade is realisable. Low-income countries which have actively encouraged local production of importables, particularly in manufacturing, generally follow this policy.

The gains from trade deriving from increased capacity utilisation are quite different in origin. In the traditional literature of developing countries local natural resources, including cultivable land, were frequently under-utilised, as was, to some degree, labour¹⁰ as a result production therefore took place well inside the frontier of possibilities, at a point such as E in Figure 1. The "opening" of the domestic economy created new (world) demand which altered the incentives facing owners of previously idle or surplus resources and labour sufficiently to bring them into production. The aggregate supply response rather than a

¹⁰ Myint 1958: H. Myint, 'The Classical Theory of International Trade and the Underdeveloped Countries', *Economic Journal*, June.

reallocation of employed resources can be depicted as a shift in the production point from *E* to *B*, on the production frontier.

Unlike to the traditional world surplus land or other natural resources are today much harder to find and surplus labour, on the other hand, is usually available; it can frequently be obtained without the necessity of bidding it away from "leisure" or non tradable production, since it is often involuntarily unemployed or underemployed. The argument for gains from trade via increased capacity utilisation-shifts like that from *E* to *B*.

Capacity utilisation in very poor countries in the 1980s and 1990s depends heavily upon the availability of critically important imports-fuel, other intermediate inputs, spare parts, etc. When such imports, cannot be financed at the levels necessary for full utilisation of capacity, underemployment of labour, capital and resources in the import-dependent sectors can occur. These inputs cannot typically be redeployed quickly into other activities so the entire economy is, in the short-to medium-term, if not longer (particularly where investment activity is also highly import-dependent), also driven to production levels that are well below possibilities. Increased exports can finance increased import of critical inputs and thus achieve increased overall capacity utilisation and gains in social welfare. Increased capital inflows or reduced debt servicing obligations can generate the same effects. These gains from trade derive from the role of imports, and increases in capacity utilisation, not from increased allocative efficiency or purported externalities from exporting activities.

The costs of "dependence", the income distributional implications of trade expansion, the costs of adjustment etc. for a developing country give ample scope to theorise the trade and development that concerns the possibility of economic growth. But even without these complications, growth can be "immiserising".

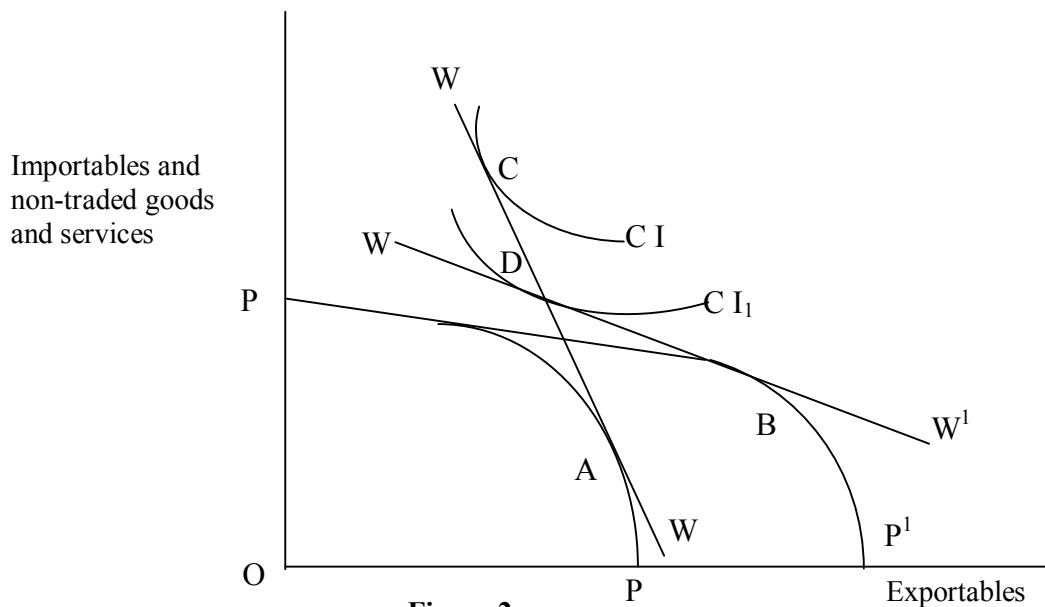


Figure 2

There can be two quite different kinds of "immiserizing growth". On the one hand, a deterioration in the terms of trade following export-led growth, a deterioration which from one country's expansion. In Figure 2, as outward movement in the production frontier from PP to PP_1 , a change in the world price (the slope of WW) from WW to WW_1 , a production shift from A to B , and a consumption shift from C to D . The decline of national welfare is indicated (abstracting from income distributional and other complications) by the fact that D is on a "lower" community indifference curve (CI_1) than C (CI_2). If the expansion in the production frontier was the product of increased factor inputs, rather than technical change, the deterioration in welfare would be even greater; more inputs would then have been utilised to generate reduced welfare. On the other hand, growth may also engender reduced national welfare if it is oriented, in response to a distorted incentive structure, too much towards non-export, typically import-substituting, activity¹¹. This possibility is shown, in Figure 3, as outward expansion of the production frontier to P_2P . The domestic price is the slope of DD , indicating a relatively lower price for exports than is found on the world market, as shown by WW . Production moves from A_1 to B_1 , consumption from C_1 to D_1 , and the deterioration in national welfare is indicated by the fact that D_1 is on a 'lower community indifference curve (CI^*) than C (CI_2). Again, if production expansion has necessitated increased factor inputs the deterioration is even greater.

Evidently the "correct" path lies between these two extreme possibilities.

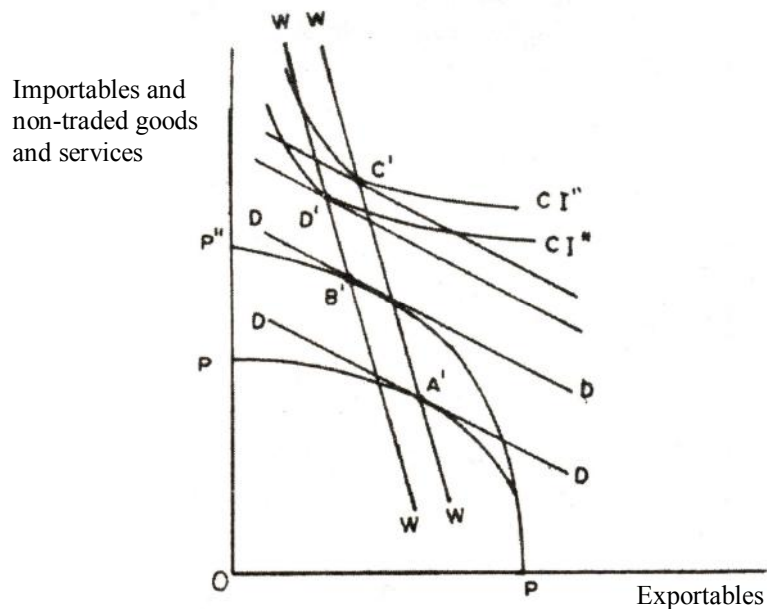


Figure 3

¹¹ Johnson 1967: H. G. Johnson, 'Trade Possibility of Income Losses from Increased Efficiency or factor Accumulation in the Presence of Tariffs', *Economic Journal*, March.

Empirical Analyses

Most of the extensive econometric testing of propositions concerning the relationship between trade and development has excluded data from very low-income countries on the ground that they were not readily available. That has not always, however, prevented the incorporation of these countries into the generalised recommendations that flow therefrom. Indeed the inferences often drawn from this literature are dubious even for those countries to which one might think they might best apply.

Early tests found simple correlation between export performance and overall growth or non-export growth. Later multiple regression analysis used in more sophisticated investigations. Using an aggregate production function framework, and making the strong assumption that the characteristics of such a function are common to all the countries in the sample, many have found statistically significant relationships between measures of export performance and growth. These investigations usually employ one of the following three specifications:

$$\Delta Y/Y = \alpha_0 \Delta K/K + \alpha_1 \Delta L/L + \alpha_2 \Delta X/x + u$$

$$\Delta Y/Y = \alpha_0 \Delta K/K + \alpha_1 \Delta L/L + \alpha_2 \Delta X/Y + u$$

$$\Delta Y/Y = \alpha_0 \Delta K/K + \alpha_1 \Delta L/L + \alpha_2 \Delta X/X + \alpha \Delta X/Y + u$$

where Y , K and L represent GDP, capital and labour, respectively, and X represents exports. The rate of growth of capital is usually, in the absence of data, approximated by the share of investment in GDP (implying a constant K/Y everywhere). Following Feder, the coefficient on the two export performance variables, $\Delta X/X$ and $\Delta X/Y$, can be interpreted, respectively, as positive externalities emanating from the export sector, and once-for-all reallocative gains associated with the reduction of previous (anti-export) distortions.

A much clearer exposition of the interrelationships between exports, imports and growth has recently been offered by Esfahani (1991)¹², who adds import variables to the traditional formalities and estimates a three equation system in which GDP, export and import growth are determined simultaneously. The growth-promoting role of exports, in his formulation, stems not from export production externalities but from their capacity to break import bottlenecks in foreign-exchange constrained economies. The extent of "import shortage" is measured by the difference between the actual and "expected" import/GDP ratio where the expected ratio is estimated as a function of GDP per capita, population and (with the most powerful influence of all) geographic area. The results of his tests on data including only semi-industrialised and "marginally" semi-industrialised countries in different sub-periods of the 1960-86 period are fully consistent with his model.

So in very low-income countries where the majority of the labour force is still in agriculture, and where agricultural productivity is low and

¹² Esfahani 1991 : H. S. Esfahani, 'Exports, Imports and Economic Growth in Semi-industrialised Countries', *Journal of Development Economics*, January.

stagnant, primary attention must usually be directed to a broad-based (unimodal) effort to "get agriculture moving" via technical change. Much of agriculture's increased output will be exported, more in small countries than in large ones, and the necessary institutional and financial infrastructure to facilitate exporting must be provided; but this trade expansion, over the long term, is incidental to the overall development thrust. Policy on exports, and trade policy more generally, are extremely important; but they are only a part of development strategy. "Openness" is not the panacea that some suggest; and trade policy involves much more than the degree of anti-export bias. These trade policy conclusions, largely derived from the experience of somewhat better-off countries, are as relevant to the very low-income countries as they are to the rest of the developing worlds.

Review questions

1. There is no justification for tariff except that they are a very important source of revenue for developing countries.” Discuss.
2. "Openness" is not the panacea that some suggest; and trade policy involves much more than the degree of anti-export bias.- Explain.

Further Readings

1. Irma Adelman, ‘Beyond Export Led Growth’, *World Development*, Vol.12, pp 973-86, (1984)
2. Balasa, ‘Exports and Economic Growth: Further Evidence’, *Journal of Development Economics*, June, vol.5, no.2.(1978)
3. J. de Melo and Robinson, ‘Productivity and Externalities: Models of Export-led growth’, World Bank Working Paper 387.
4. G. K. Hellenier, ‘*International Trade and Economic Development*, Penguin.(1972)
5. Anne Krueger, ‘Trade Policies in Developing Countries’, in R. Jones and P. Kenen, eds., *Hand Book of International Economics*’ (North-Holland),1985.
6. World Bank, *World Development Report*, 1987.
7. World Bank, *World Development Report*, 1987.

Lesson 4: Micro Finance

Objectives:

The micro finance is highly supervised low-cost credit to the rural poor without any collateral, facilitating generation of income-earning activities in both agriculture and non-farm sectors. The Micro Finance Institutions (MFIs) emerged in the backdrop of long-running concern with the difficulties of providing formal finance to rural areas as well as in the wake of informational constraint prevailing in rural credit market. The micro finance is provided in a group setting with peer monitoring to address informational constraints - moral hazard and adverse selection. The objectives of the lesson are to:

- Comprehend the emergence of micro finance institutions.
- Understand the group based lending and peer monitoring.

Introduction

The poor operate in a mini-economy in which production, consumption, trade and exchange, saving, borrowing and income-earning occur in very small amounts. The effect of this is that transaction costs tend to be high as the 'unit' of transaction is generally minuscule. Thus charging of any standardised administrative cost will commonly make transactions unattractive to the poor. The poor's life is characterised by high levels of insecurity and risk as flows of income and expenditure commonly do not coincide, because of household-specific factors (loss of earnings because of sickness, urgent medical expenses, premature death, theft, insecure conditions of employment, difficulties of contract enforcement), and because of broader environmental factors (natural hazards, harvest failure due to drought or flooding, national economic crisis). The covariant nature of the risks associated with this latter group are particularly problematic as they weaken the capacity of community-based social security networks to provide support. These characteristics have a number of consequences. (i) They limit the interactions of poor people with formal sector institutions. (ii) They foster strategies of risk-spreading by the poor: these encourage diversification of economic activities and the development of financial relationships with networks of individuals, groups and agencies.

Many developing countries had instituted government-directed financial institutions to provide low-priced credit to the poor, but much of the analyses on these institutions suggest that directed rural credit programmes have rarely created feasible alternatives to stave off credit market imperfections (Adams *et al*, 1983, 1984; Feder *et al*, 1989; Sacay and Randhawa 1995; von Pischke *et al*, 1983).

Another fundamental feature that creates imperfections in credit markets is informational constraints. Informational gaps occur at two basic levels. First, there is lack of information regarding the use to which a loan will be put. Second, there is lack of information regarding the repayment

decision. This deficiency includes limited knowledge of the innate characteristics of the borrower that may be relevant in such a decision, as well as limited knowledge of the defaulter's subsequent needs and activities, which place limits on his incentive to default. All the important features of credit markets can be understood as responses to one or the other of these informational problems. The MFIs have tried to address the above constraints through group based lending with peer monitoring.

Group based lending and Peer monitoring: Essential Feature of Microfinance

The essential feature of the MFIs are: *group-based lending*, *social collateral* and *peer pressure*. The group-based lending, footed in peer pressure for monitoring and contract enforcement, avoids adverse selection of borrowers and improves the prospects of loan recovery (Stiglitz, 1990; Varian, 1990). Basely and Coate (1995) argue that 'social collateral,' being a powerful institution in the circumstances of peer pressure and squeeze of adverse selection, acts as deterrent to loan default. Group lending can help poor self-selecting programmes, making it a robust instrument of identification and targeting.

The group based lending model addresses moral hazard and adverse selection. Moral hazard is done away with through peer monitoring while adverse selection is addressed through selection of borrowers as the members are highly selective about who they will join with. Importantly, choosing candidates for loans and monitoring the progress of repayments are all done by the group members themselves, not directly by officials of MFIs. Moreover, there is a strong incentive (conditionality!) attached to the group to help each other out as members of the group can only get loans if other members succeed in investment, meaning keeping the repayment schedule regular without default.

To understand the peer monitoring¹³ assume that every borrower has a neighbour who is also a borrower. The two borrowers can monitor each other. The lender would like each to report if his neighbour is undertaking the risky project (the success of their project is independent). The lender wants to create an environment in which it is in the self-interest of each borrower to monitor the other and report any cheating. The lender offers a contract providing that if the neighbour agrees to cosign; the cosigners agrees to pay some amount to lenders in the event that the loan he has cosigned goes into default, of course provided that he himself does not go into default. If we assume that they co-operate with given their independence then they will decide whether to undertake the project and if the project is risky, they will agree not to report it. Now having the individuals cosign his neighbour's loan imposes on him an additional risk. If both borrowers are successful, their

¹³ Stiglitz. J. E., 'Peer Monitoring and Credit Market', Hoff. K., B. Avishay and Stiglitz. J. E eds., *The Economic Rural Organization: Theory, Practice, and Policy*, Oxford University Press, 1993.

income and utilities are higher; but if one is successful and other is not, then the first borrower's income and utility are lower. To compensate him for undertaking the additional risk, he would be able to get larger loan.

Stiglitz suggests that the members of the peer group must be provided with incentives to monitor the action of their peers. In the Grammen Bank this is provided by stipulating that access to future loans by each member of the group depends on the repayment performance of all the members.

The Grameen Bank of Bangladesh has been in the vanguard of the microfinance movement, reporting repayment rates of 98% and modest profits while serving over two million functionally landless borrowers. Replications have been started on four continents, and further expansion is planned. The bank's achievements rest on a steady flow of subsidies, and the subsidies. Grameen's financial performance was aided by negative real costs of borrowed capital, averaging -1.6% during 1985-96. While the bank reports profits that sum to \$1.5 million between 1985 and 1996, the profits rest on \$16 million of direct grants, \$81 million of implicit subsidies via soft loans, \$47 million of implicit subsidies through equity holdings, and at least \$27 million in delayed loan loss provisions. The results help to explain why institutions like Grameen have not just sprung up on their own. While the bank's reported rate of overdue loans (not repaid one year after the due date) averaged 1.6% between 1985 and 1994, redefining and recalculating the rate yields an average overdue rate of 7.8%. The recalculations also show evidence of severe, localized difficulties, with overall overdues hitting 15% in 1994. The evidence suggests that group-lending under joint liability is not a panacea for credit market imperfections. The broader evidence also underscores the value of openly addressing the costs and benefits of subsidization, as well as the social optimality of microfinance "best practices."

Some Issues

The impact on human capital exhibits a positive correlation when compared against control village. The indicators such as literacy, children's schooling, use of sanitary latrine etc. signals a positive spill over effect in contrast to non-programme village. The health and reproductive indicators do not bear out any clear picture.

Despite repeated assertions by the MFI's of their success stories and increase in coverage, the rate of decline in national poverty remains modest. This leads to questions: why have not benefits of micro credit trickled down to macro levels? Is the paradigm in crisis? A recent BIDS study on PKSf-MES reveals that members in 16 per cent of the participant households enrolled in more than one NGOs. Is the cost of borrowing (high interest rate charged by MFIs) pushing the borrowers to become members of multiple MFIs in order to maintain repayment schedule? Is it because that the size of the loanable amount is too meager to start even a small productive venture? The issue of graduation of the

members has surfaced as a second generation problem of the micro-credit based programmes. As evident from the Table 7.4, the micro-credit has not been able to make perceptible changes among the rural poor in relation to the number of poor. It is seen that a large number of borrowers have failed to retain earnings, increase savings and investment, and continue to depend on fresh loans as they failed to increase investible surplus. A recent BIDS Survey (1998) indicates that only eight out of 85 per cent of once borrowers are not currently borrowing.

The impractical repayment schedule is inhibiting their graduation and making them dependent on the MFIs. The question that arises and requires rigorous analysis: Do the borrowers pay out of current income? Are the participants able to use their loans in productive ventures with such pressing demand for repayment?

Across the board it is acknowledged that the rate of interest is high. Indeed the analysis of the programme level financial viability shows that the MFIs need to keep higher rates of interest in place to remain financially viable. The question remains: How would one term them financially viable if they continue to charge such exorbitant interest rates which are higher than the commercial lending rates? Is there any institutional constraint which requires the MFIs to charge such high interest rates? These issues are critically important and need to be put under rigorous investigations through further research, based on adequately large samples of respondents.

Review Questions

1. Discuss group lending, repayment incentives and social collateral.
2. Analyse default incentive, peer pressure and equilibrium outcome in group based lending.
3. Is the micro finance reaching ho needs most?

Further Readings

1. Alderman, H. and C. Paxson, 1994, “*Do the Poor Insure? A Synthesis of the Literature on Risk Sharing Institutions in Developing Countries*”, in International Economic Association Moscow Conference, Vol. 4.
2. Besley, T. and S. Coate, 1997, “Group Lending, Repayment Incentives and Social Collateral”, *Journal of Development Economics*, 46: 1-18.
3. Diagne, A., 1998, “*Default Incentives, Peer Pressure and Equilibrium Outcomes in Group Based Lending Programmes*”, Paper presented at the Annual Meeting of the American Economic Association, Chicago.
4. Dreze, J. and A. Sen, 1989, *Hunger and Public Action*, Oxford: Oxford University Press.
5. Ghate, P.B., 1988, ‘Informal Credit Markets in Asian Developing Countries’, *Asian Development Review*, 6(1).
6. Wood and I. Sharif (eds.), ‘*Who Needs Credit ? Poverty and Finance in Bangladesh*’, Dhaka: University Press Ltd.: 83-96.
7. Hoff, K. and J.E. Stiglitz, 1990, “*Introduction: Imperfect Information and Rural Credit Markets: Puzzles and Policy Perspectives*”, The World Bank Economic Review, 4(1): 235-50.
8. Ito, S., 1998, “The Grameen Bank and Peer Monitoring: A Sociological Perspective” in I. Matin and S. Sinha (eds.), *Proceedings of a Workshop on Recent Research on Micro-Finance: Implications for Policy*, Poverty Research Unit at Sussex (PRUS) Working Papers No. 3, Sussex: 175-90.

Lesson 5: Health and Population

Objectives:

The health of the population has bearing on the development. The size and growth rate of the population affect the economic growth rate while the level of development influences the population growth rate; so the development performance of a country depends crucially on its population size and rate of growth. The long term sustainability of growth depends on the health of the population its control as well as technological advancement that economise on resource usage.

After studying this lesson, you will be able to:

- Describe the factors account for most of the health improvements in the 20th century.
- Explain the social and economic challenges that result from different population age structures.
- Explain how are major health risks changing for different groups of countries.
- Suggest appropriate public policy towards the reform of the health sector with special emphasis on public expenditure policies.

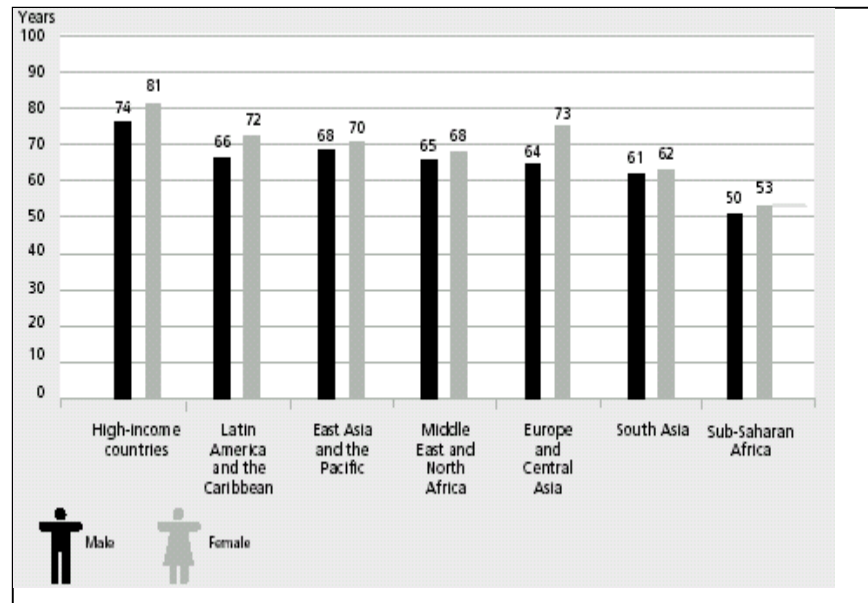
Global Trends

During the second half of the 20th century health conditions around the world improved more than in all previous human history. Average life expectancy at birth in low- and middle-income countries increased from 40 years in 1950 to 65 years in 1996. Over the same period the average under-5 mortality rate for this group of countries fell from 280 to 80 per 1,000. But these achievements are still considerably below those in high-income countries, where average life expectancy at birth is 77 years and the average under- 5 mortality rate is 7 per 1,000.

Throughout the 20th century, national indicators of life expectancy have been strongly associated with GNP per capita. The two other factors believed to be the most important for increasing national and regional life expectancies are improvements in medical technology (with some countries clearly making better use of it than others) and development of and better access to public health services (particularly clean water, sanitation, and food regulation). Education, especially of girls and women, makes a big difference too, because wives and mothers who are knowledgeable about healthier lifestyles play a crucial role in reducing risks to their families' health.

These other factors help explain how most developing countries are catching up with developed countries in terms of people's health even though they are generally not catching up in terms of per capita income. Progress in medical technology, public health services, and education allows countries to realize "more health" for a given income than before.

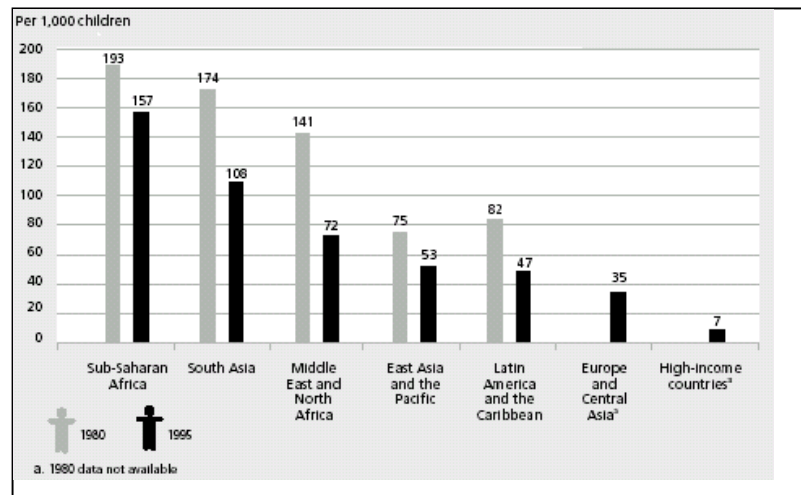
Life expectancy at birth, 1995



Source: Soubotina, T. P. and K. A. Shera, *Beyond Economic Growth*, Washington: World Bank, 2000

In general, for nearly all countries, life expectancy at birth continued to grow in recent years. In developing countries this growth was largely due to much lower under-5 mortality. Better control of communicable diseases that are particularly dangerous for children, such as diarrhoea and worm infections, accounts for most of the gains. In many countries higher per capita incomes also contributed to better nutrition and housing for most families.

Mortality rate of children under age 5, 1980 and 1995

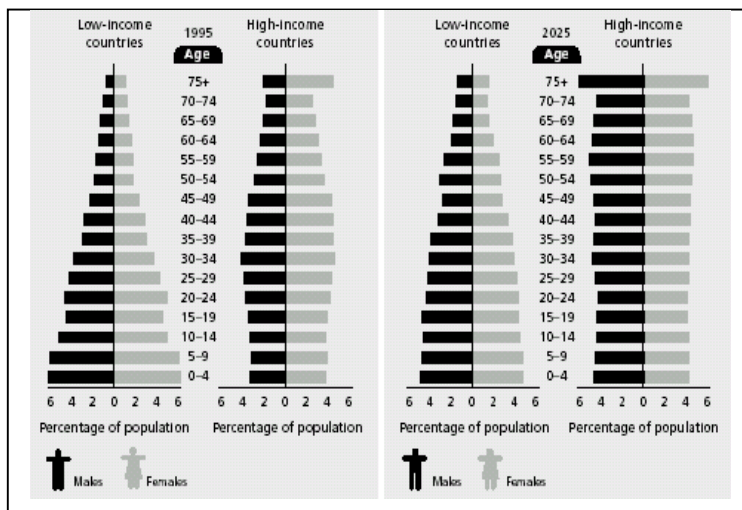


Source: Soubotina, T. P. and K. A. Shera, *Beyond Economic Growth*, Washington: World Bank, 2000

Population Age Structures

The health and longevity of a country's people are reflected in its population age structure- that is, the percentages of different age groups in the population of the country. A population age structure can be shown by a population pyramid, also known as an age-sex pyramid. In such pyramids a country's population is divided into males and females as well as age groups (for example, five-year age groups. Figure below shows population pyramids typical of low- and high-income countries in 1995 and expected to be typical in 2025. Note how these shapes represent higher birth rates, higher death rates (particularly among children), and lower life expectancies in low-income countries. Think about why in poor countries the base of the pyramid is broader and the pyramid is basically triangular rather than pear-shaped or rectangular as in rich countries. Explain also the changes expected to happen to both pyramids by 2025.

Population pyramids for low and high-income countries, 1995 and 2025



Source: Soubbotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000.

In low-income countries more than one-third of the population is under 15, compared with less than one-fifth in high-income countries. From a demographic perspective, that means that larger age groups are about to enter childbearing age, and the increase in the number of parents will outweigh a decrease in the average number of children per family. This phenomenon, called population momentum, will keep birth rates high despite a drop in fertility. From a social and economic perspective, a high percentage of children in a population means that a large portion is too young to work and, in the short run, is dependant on those who do. This is the main reason for the relatively high age dependency ratio in most developing countries. While in high-income countries there are roughly 2 people of working age to support each person who is too young or too old to work, in low-income countries this number is around 1.0-1.5.

High-income countries currently face the problem of an aging population- that is, a growing percentage of elderly, nonworking people. In 1996 people 60 and above made up 18 percent of the population in these countries, and this portion is expected to grow to almost 22 percent by 2010. In several of these countries (Belgium, Germany, Greece, Italy, Japan, Sweden) the share of elderly people has already reached or surpassed 21 percent. An aging population puts greater pressure on a country's pension, health care, and social security systems.

As life expectancy continues to increase in developing countries, they too will face the problem of an aging population . In fact, developing countries are expected to be hit even harder because they are financially less prepared to deal with it, because the rate of growth in life expectancy and therefore population aging is much faster than in developed countries, and because there will be a high dependency ratio of both children and elderly people.

The issue of gender imbalance increasingly pronounced in older age groups due to the naturally higher longevity of females. In high-income countries on average there are 133 females per 100 males 60 and over. In low-income countries the imbalance is smaller (104 females per 100 males), but the reasons for this seeming "advantage" of poor countries are higher maternal mortality and gender discrimination, including discrimination in access to health care.

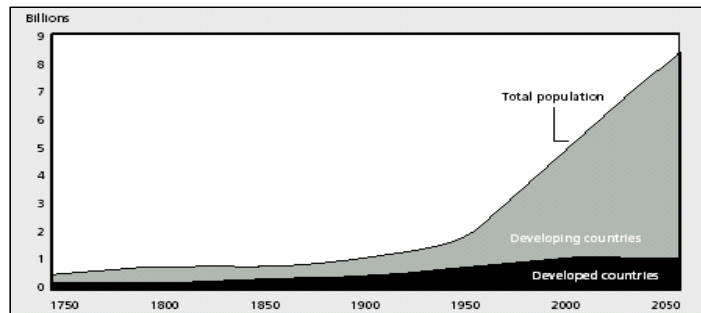
Future Challenges

As the health of the world population has improved, the burden of disease has declined. Simultaneously, the structure of disease has shifted rapidly from a preponderance of communicable disease (diarrhoea, worm infections, measles), which are the main health risks for infants and children, to a preponderance of noncommunicable disease (heart and circulatory disease, cancer) that mostly affect adults. While there are inexpensive and effective ways to eliminate most communicable diseases, noncommunicable diseases are generally much more expensive to treat. Moreover, substantially reducing their incidence will require changing people's behaviours and lifestyles.

Population

Population dynamics are one of the key factors to consider when thinking about development. In the past 50 years the world has experienced an unprecedented increase in population growth.

World Population, 1750-2050

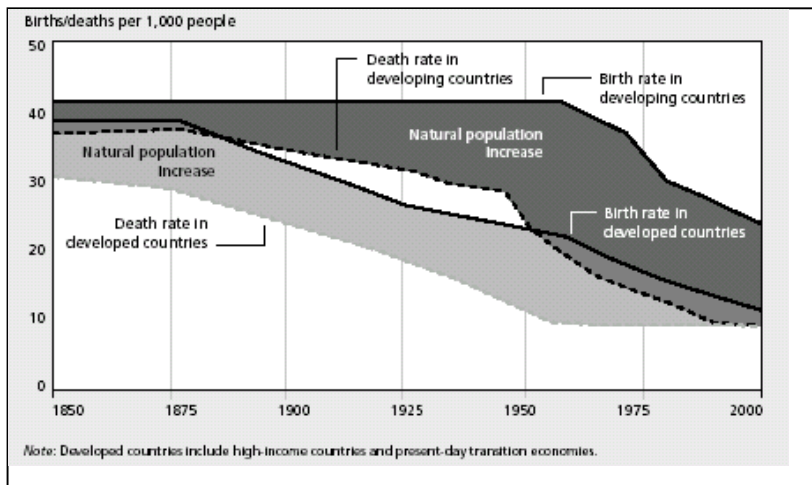


Source: Soubotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000

A "natural population increase" occurs when the birth rate is higher than **the death rate**. While a country's population growth rate depends on the natural increase and on migration, world population growth is determined exclusively by the natural increase.

Around the world, death rates gradually decreased in the late 19th and the 20th centuries, with death rates in the developing world plummeting after World War II thanks to the spread of modern medicine. In much of the developing world the decline in death rates preceded the decline in birth rates by 20 years or more, resulting in record- high rates of population growth of 3 percent or even 4 percent a year. Since the 1960s birth rates have also been declining rapidly in most developing countries except those in Sub-Saharan Africa and the Middle East. This trend in birth rates in the developing world is comparable to what took place in Europe and the United States in the 19th century.

Trends in birth and death rates, 1850-2000

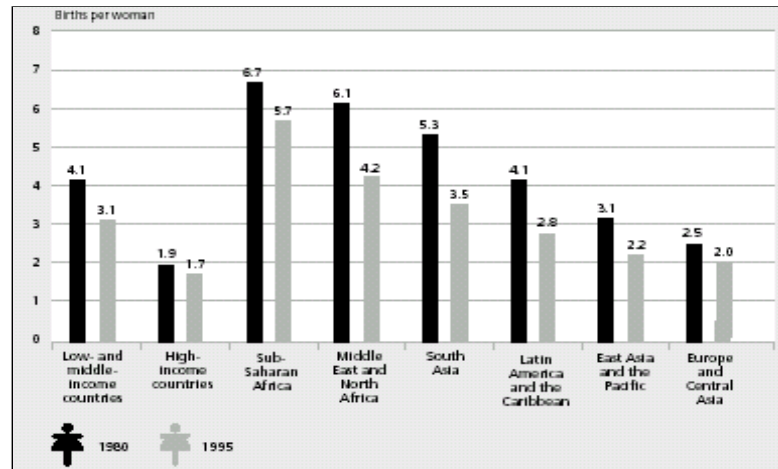


Source: Soubbotina, T. P. and K. A. Shera, *Beyond Economic Growth*, Washington: World Bank, 2000

Today's low-income countries still have the world's highest birth rates although women tend to have fewer children than before. The reasons for lower fertility are varied, but most are related to developing countries' economic growth and human development. Parents choose to have smaller families when health conditions improve so that they no longer have to fear that many of their babies might die, and when they do not have to rely on their children to work on the family farm or business or to take care of them in their old age. In addition, more parents are sending their daughters to school, which is important also because women with basic education tend to produce healthier children and smaller families. More women now have opportunities to work outside the home, so they are starting their families later and having fewer children. On top of all that, access to family planning is improving, so parents can control the number and spacing of their children.

A lower fertility rate may not immediately lead to a lower birth rate and lower population growth if a country has a larger number of men and women in their reproductive years than before. Population growth caused by more women giving birth even though each has the same number of or fewer children is called "demographic momentum." Demographic momentum is particularly significant in developing countries that had the highest fertility rates 20-30 years ago.

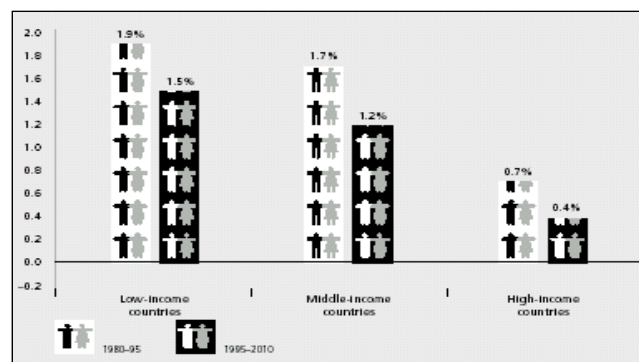
Average fertility rates, 1980 and 1995



Source: Soubotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000

The decline in birth rates over the past few decades has lowered population growth rates in developing countries despite a continuing decline in death rates. Population growth is even slower in developed countries. Stabilizing birth rates and increasing death rates (the latter being a result of aging populations; have already led to a natural population decrease in Italy and Germany. Japan and Spain are expected to follow soon.

Average annual population growth rates, 1980-2010



Source: Soubotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000

Over the past 30 years the worldwide population growth rate fell from more than 2.0 percent to 1.5 percent a year, and experts expect this trend to continue. But in absolute numbers the world's population is growing faster than ever before- by about 230,000 people a day in mid-1995. This is happening because of the larger than ever population base. In 1995 there were about 5.7 billion people on earth, almost twice as many as in 1970. The next 35 years are projected to add another 2.5 billion people- 90 percent of them in developing countries. The share of developing countries in the world population is expected to increase from 84 percent to 88 percent.

In the short run, rapid population growth in poor countries leads to lower GNP per capita, allowing fewer resources to be invested in each person's **human capital**- the key to increasing labor productivity. But in the long run, provided that labor productivity does in fact increase, having more workers could contribute to the economic strength of developing countries.

Population: An Analytical Exposition

The negative aspect of the population growth is that per capita income becomes smaller with the population growth; that means the ratio (output/population) start decreasing. On the other hand it can be expected as a positive aspect as it is linked with overall output and labour force. Figure 1 depicts both aspects of a larger population.

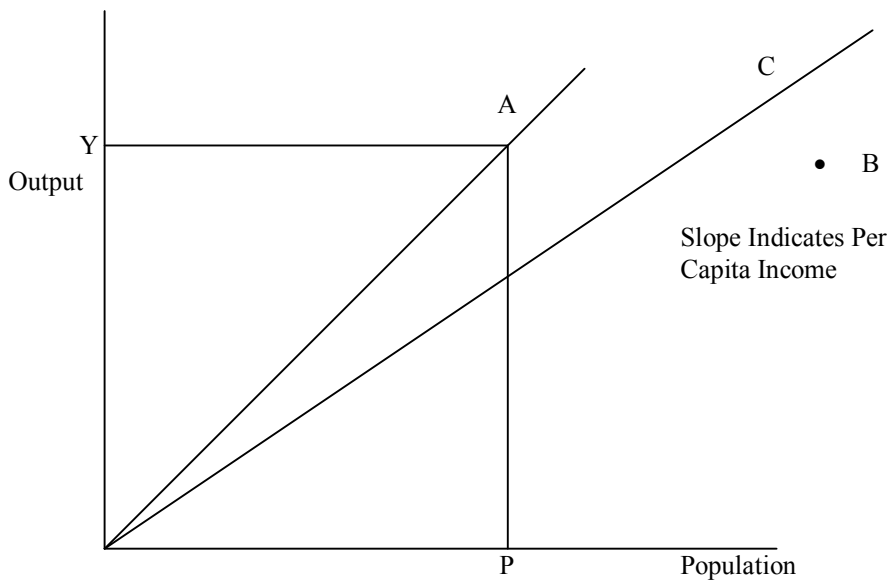


Figure-1

At the initial point A, output is Y and the population is P ; the slope of the line to A from the origin is per capita income . If the same output had to be shared with the large population at B the per capita income will go down. However the added population also adds to output along the curved line. This production function shows how an increased labour

input causes output to increase, but with diminishing productivity. The level of per capita income at C is lower than before.

The three proximate determinants of the population growth are birth, death and migration rate. As life expectancy increases, population expands even if the birth rate is unchanged. With the progress of development, the death rate drops rapidly, however the birth rate drops only very gradually. People are slow to change their reproductive behaviour, and the birth rate may even rise initially as improved prenatal care increases survivability after birth. The wider gap between birth and death rate causes a jump in the population growth rate. The demographic transition - the shift from a period of high mortality, high fertility, relatively stable population through a period lower mortality with relatively high fertility and rapid population growth, to a period of low mortality and fertility and thus once again stable population- is still incomplete in most of the poor countries. Demographers assume that the demographic transition eventually run its course in developing countries as well. The global rate of population growth over the past half century has been the highest in history. Most of this growth has occurred in poor countries.

Fertility Decision

The conventional approach to understanding fertility decisions depends on the choices of the household with regard to fertility are treated in a manner analogous to all other decisions taken by the household. Fertility decisions are made through a process of negotiation within households, but they are not made in isolation. The proximate determinants of fertility - the use of contraceptives, the timing of breast feeding, the frequency of intercourse - are actions that are strongly influenced by cultural patterns. The choices regarding fertility generate an externality: each household's child bearing decision helps set a cultural pattern, and this affects the pattern of all other households. The form of the externality generated by fertility decisions involves strategic complementarities. The marginal utility to a household of having an additional child is increasing in the number of children in other households. In the context of fertility decision, suppose a society is characterised by high fertility for conventional reasons (perhaps a high rate of infant mortality). Consequently a set of practices (e.g. polygyny and a low age of marriage for women) that encourages high fertility is common. Even after the infant mortality declines, these practices remain and as a consequence each household continues to choose high fertility.

Various market failures affect fertility within the human capital framework, even capital market imperfections can have an indirect effect on increasing desired fertility. Many households do not have an easily accessible method for savings so the most convenient means to provide for old age support is through investment in children. So the social security can affect fertility. Moreover, in the choice of fertility behaviour women's role is very much important.

The modelling¹⁴ of the fertility behaviour focuses on the two insights: production-of meals, healthy children and an important input to the production that is consumption. In the ‘house demand’ model of fertility the household maximises a utility function which includes both the number and quality of children and consumption:

$$U = U(N, Q, Z) \text{-----}(1)$$

where N is the number of children, Q is per child quality or the household investment in each and Z represents the rate of consumption of all other commodities. Parents maximise utility subject to a constraint in which production of children requires inputs not only of money but of parents time:

$$C = NQ = f(t_c, x_c) \text{-----}(2)$$

where t_c and x_c are vectors of the total amount of time and goods parents devote to children during to parents’ life time. N and Q enter as separate arguments in the utility function, but in the production function it is child services, C , set equal to NQ , which is produced.

The budget constraint that family faces is defined in terms of non-labour income and total value of parents’ life.

$$I = NQ\pi_c + Np_N + Qp_Q + Z\pi_z \text{-----}(3)$$

where

I is the family’s full income, the π_i are the cost-minimising shadow prices; p_N is a fixed price applying to that component of total child costs that is independent of the level of Q chosen; and p_Q is a fixed price applying to that component of total the level of N chosen. Solving the first order condition of we get a system of demand equations:

$$N = N(I, \pi_c, p_N, p_Q, \pi_z) \text{-----}(4)$$

$$Q = Q(I, \pi_c, p_N, p_Q, \pi_z) \text{-----}(5)$$

$$Z = Z(I, \pi_c, p_N, p_Q, \pi_z) \text{-----}(6)$$

Here child quality and child quantity are jointly determined dependent variables; neither can be assumed to be an independent determinant of the other.

The association of high and rising income with low and falling fertility can be explained with two possible ways; the first one is the price effect. A principal component of the cost of children is the time parents devote to childbearing and child rearing. In higher income societies, wages and thus parents’ opportunity of cost are relatively higher. In so far children are most sensitive than other consumption commodities, their relative

¹⁴Birdsall Nancy, ‘Economic Approach to Population Growth’, *Handbook of Development Economics*, Vol. I, Chapter 12.

rises with rising wages. An increase in women's education is associated with a decline in fertility than in increase in men's education.

The second one is that parents will substitute quality of children for high numbers of quantity in the production and consumption of children. In the production function child services quantity and quality interact-because one must have children to invest in their quality. As a result declines in the price of child quality, secular increases in the price of child quantity and a decline in the fertility in a modern economy is not surprising.

Policy

The impact of planning programme on fertility decline requires controlling for other possible causes such as increases in education or declines in mortality and information sources. In the arena of fertility control public policy should be set to create a market that for contraceptive information is poor. The argument that the market for contraceptive information is poor, justifying the public intervention, is sometimes extended to the idea that the market for certain contraceptive services is poor; such contraceptive methods as the pill and the intrauterine device(IUD) require medical backup. The results poor market for information and services, can be 'unmet need' for family planning, a concept of demographer; it denotes a specific measure- i.e. the number of eligible women in a sample who say that they want no more children or want to delay child birth, but are not using contraception. It is not equivalent to the economic concept of unmet demand, as it does take into account any constraint.

Assuming public subsidies are financed appropriately and programmes are fully voluntary, public involvement in family planning as a means to reduce fertility is likely to improve individual's welfare. Incentives are specified rewards for specified fertility behaviour. There are two types of incentives¹⁵: incentives that reduce the barriers to contraceptive use, and incentives that change the relative cost of children and thus directly reduce the demand for children. In the first category would be payments to individuals who agree to attend a session providing information on contraception, who are compensated for their time and travel costs when they attend a family planning programme. These kind of entitlements are relatively easy to justify, particularly if they are merely for receipt of information. In the second category would be payments to individuals associated with maintaining a limit on their number of children. Entitlements to Chinese couples who have only one child- for better housing, higher wages, education privileges for their one child - are a classic example. This approach is principally concerned not with the total reduction in births, but with assuring that the private and social value of each birth is identical and that the distribution of any births averted due to entitlement policies reflects optimising decisions by individuals.

¹⁵ See Chomitz, K.M. and Birdsall, N. (1987) 'Incentives for Reducing Fertility: Concepts and Issues', World Bank, Population, Health and Nutrition Department Discussion Paper.

At some point a quota on the number of children any couple have may appear more fair than incentives, since rich and poor alike would be equally constrained. On the other side a quota in developing countries could deprive the poor of the benefits of having additional children- and without any compensation; the rich are less reliant on having many children for economic reasons. Concurrently quota are less efficient than incentives. With a quota, some individuals will in effect be rationed; other might choose the number of children permitted, or fewer children.

Finally, the following goals and objectives might be include in any realistic approach to the issue of population growth in many developing countries:

- In those countries or regions where the population size and, distribution and growth is viewed as an existing and potential problem, the primary objective of any strategy to limits its further growth. Goals such as the elimination of absolute poverty, gross inequality, widespread unemployment specially among females, limited female access to education, malnutrition and poor health facilities need to be given high priority both as necessary concomitants of development and as fundamental motivation basis for the expanded freedom of the individual to choose and optimal and smaller than present family size.
- In order to maximise the achievement of smaller families through development induced motivations, family planning programmes providing both education and the technological means to regulate fertility.
- Developed countries need to assist third world countries to achieve lowered fertility and mortality objectives not only by providing contraceptives and funding family planning clinics but curtailing their own excessive depletion of resources through programmes to lower the unnecessary consumption of scarce metals and nonrenewable resources.

Poverty Fertility and Gender: Empirical Evidence¹⁶

The countries with high fertility rates tend to be poorer. Demographers have sometimes taken this correlation to imply causation. According to this view, limiting population growth is seen as an essential first step in reducing poverty, and this has been put forward as the basis of development strategies at numerous international conferences.

Economic theory, however, suggests the opposite causal relationship. The argument rests on the assumption that households have reasonable control over fertility rates. The central reason is that children can help poor families earn extra income and adapt to imperfections in labour and credit markets. Higher fertility may be a way out of poverty, rather than a

¹⁶ Anand, Sudhir and Morduch, Jonathan *Poverty and the 'Population Problem'* December 1996

force which holds poor families down. New evidence from Bangladesh that the observed statistical relationship between poverty and household size may largely be due to mis-measurement; this leads us to question the severity of the population problem there, at least at the household level. Examining the argument that choices made by parents may be rational (as postulated in economic models) but, when taken collectively, the decisions may turn out to be less than optimal for society as a whole. This might be, for example, because parents do not account for their contributions to environmental degradation or to poor labor market conditions in making fertility decisions. Thus, high fertility regions may be substantially poorer, even if the evidence is weak that bigger households are poorer than introduction or extension of family planning programs should have only small effects. The relative importance of the claims is an empirical issue. Recent evidence using cross-country comparisons and evidence from the Matlab studies in Bangladesh have been interpreted as indicating that nearly all pregnancies are, in fact, desired as predicted by the economic model. T. Paul Schultz (1994) provides further evidence from cross-country studies showing limited impacts of family planning programs on fertility. Gertler and Molyneaux (1994) integrate the two strands of argument in an empirical framework which helps to show the important interactions between economic determinants of fertility change and the availability of contraception. Despite much broad discussion along these lines, there is little hard evidence yet that these issues matter empirically.

It is the issue of *who* within families bears the greatest burden of poverty. Increasingly, evidence shows that it is girls and women who suffer most. This is clear in the commonly-observed lower education and health outcomes of girls relative to boys, and in some regions it is manifested in excessively high female mortality and morbidity rates. Drawing on the two most recent national censuses and two recent household level data sets from Bangladesh, mortality rates for females are much higher than for males. Fertility rates are greatly influenced by the desire to have boys. The evidence suggests that these two phenomena reinforce each other, and together they push up the high rates of excess female mortality.

This gives a very different sense in which demographic realities must be confronted in considering poverty, and it turns us towards a broader notion of deprivation that goes beyond simple metrics of well-being defined in terms of household income or consumption. The evidence from Bangladesh underscores the importance of considering the poverty of individuals -- and not just poverty at the level of households, families or regions. The evidence also underscores arguments that the notion of "well-being" should be bound up with the ability of all individuals to live full and healthy lives. A central corollary of that concern is freedom from discrimination, particularly discrimination based on gender. The problem is not, then, that fertility rates are too high *per se*. Rather, the problem is that girls and women bear a disproportionate burden associated with the high fertility rates.

Public Policy and Public Expenditure in the health Sector

Market Failures

In the real world, there are many instances in which private markets may fail to produce the socially optimal quantities of goods and services. Applied to health, the following types of market failures can be identified from the analysis in the earlier sections:

Capital and insurance market imperfections. The private purchase of health is beyond the means of many poor families. The credit market and the insurance system prevailing in Bangladesh do not provide an effective solution because of strong imperfections that reduce participation, particularly among very poor people. Moreover, the insurance market is yet to be developed in Bangladesh, apart from risk pooling from kinship.

Incomplete information. Market failure also relates to the problems of uncertainty and incomplete information. Households are not aware of the existence of services in sector, and lack of presence of referral system induced them to enter in to services which is otherwise may have been cost-saving.

Externalities. Some of the benefits from health accrue not only to its direct recipients but also to society at large. Good health, for example, lowers the transaction costs amongst individuals; women's better health brings external benefits for child health and nutrition. In deciding how much to purchase, individuals compare only the personal benefits and personal costs. Private provision, or full cost-recovery, would result in under-investment in the health sector, as has been the case in poor household in the country whereby rate of infant mortality is high amongst them.

Principle-agent. The relevant decision-making unit is usually the household--more accurately, the parents within it--and not the child. For example, the important issue is the perceived balance between the costs and benefits to the parents of spending on the child's health to immediate consumption for leading a subsistence life. Since only some portion of the returns may accrue to parents, there may be rational (if regrettable) reasons for households to under-invest in child's health, notwithstanding its apparently high economic returns.

Equity and Merit Goods

In the absence of market failures, there may also be a case for government intervention on grounds of equity and merit goods:

Equity. Not all groups in society can afford the direct and indirect costs associated with investing in health. The government therefore plays a role in promoting equality of opportunity. If health care was provided under market conditions, only those who could afford to pay would be able to avail. Not only would there be under-investment from the social point of view, but income inequalities would be preserved from one

generation to the next, since good health is itself a determinant of lifetime income.

Merit goods. Health is often considered a type of good with special merit that is not readily quantifiable and that might be under-supplied if left to the market. Basic education, for example, is an important channel through which governments advance nation building.

Public expenditure should be concentrated on goods and services that the private market will not provide, or provides too little of, rather than merely substituting for, or even marginally improving upon, the private market outcome.

Reform in the Public Expenditure: Towards a Decentralized Resource Allocation System

Existing resource allocation and budgeting system

The existing resource allocation and budgeting system is based upon budgetary demand covering both the development and revenue sides of the budget. In the Bangladesh public sector, the terms revenue and development budgets are used to denote what elsewhere may be known as the recurrent and capital budgets. The system was designed to be “top-bottom.”

No clear policy guidelines or estimates of future financial availability are applied in drawing up the budgets. While some norms are deployed, it is widely recognized that these bear little relation to real needs, as has been seen in the earlier section.

Although adjustment is made centrally in recognition of new facilities, the main allocative driver is the historical budget rather than health or health service needs. This leads to the practice of budget holders using the virement process (transfer of items from one financial account to another) to try to adjust budgets after they have been set, rather than formulating robust initial budgets, even though virement is itself a cumbersome process. Specific aspects of the system are discussed further below.

Overall budget structures

One of the issues surrounding the development of resource allocation processes relates to the complexity of the relationships between the existing budgets. Annual Development Programme (ADP) is controlled by Planning Ministry. In theory an ADP comprises a number of planning proposals, which set out the development and revenue implications of a project for overall approval. In practice the revenue implications are considered less critically at the time of the ADP.

The number and type of budgets tend to cause confusion, particularly in terms of the relationship between development items and on-going revenue items. First, as a result of the stringent controls on the use of the permanent revenue budget by the Finance Ministry, a habit has arisen of using the development budget to finance what effectively are ongoing

revenue items. Second, the parallel nature of the revenue budgets leads to complexities in budgeting procedures and a danger of overemphasis on process rather than strategy. In addition, the lack of linkage between development and revenue budgeting has led to an over-extension of future revenue requirements.

The products of all this are budgets and patterns of resource allocation with high degrees of inequity and inefficiency. The budgets that result are as described below.

- Inefficient between-line items, particularly between salary and non-salary items.
- Inequitable between similar service units. For example, allocations to hospitals with apparently similar capacity or demands (as indicated by the number of beds or utilization levels).
- Inequitable between populations with apparently similar health needs.

The above-mentioned constraints clearly indicate that the allocative system was not working in a way that would either induce efficient practice or promote equity between districts, regardless of how the latter was defined and measured. Overall, the budgeting and resource allocation system is viewed as an obstacle rather than a support to need-responsive health care.

Alternative models

Four potential allocative models are discussed below:

Model A. Incrementalist (current model)

The present public spending, in practice, is based on the previous year's allocation (or expenditure), increased pro rata, though the possibility exists for new budgets to be added through the annual schedule of new expenditure. Though this approach is administratively simple and non-threatening it neither promotes efficiency nor equity.

Model B. Health facility requirement.

Budgets would be set to ensure that the major existing primary and secondary level facilities are provided with adequate resources to allow them to operate effectively and more efficiently. This would not lead to an improvement in the distribution of resources between districts. However, it would improve the quality of care at existing facilities, and indeed provides rewards to facilities with high utilization rates.

Budgets would take into account the real costs and utilization rates of existing facilities. However, to avoid major swings in allocation to different districts, which might run counter to equity, ceilings on increases would need to be set. Such ceilings could initially be based on a crude per capita basis and would take into account absorptive capacity.

Explicit prioritization would also need to be made between facilities within districts, as this approach on its own will not lead necessarily to adequate overall resource levels in districts. Districts would have to make their own prioritization decisions between facilities, based on their assessment of differential need. Some training would be required for district managers and central staff, but the close links to existing facilities would mean that it was politically acceptable and intuitively understandable.

Model C: Health service requirement.

The third approach is an enhancement of the second. Through strong links into district planning, budgets are tied more closely to the overall health service requirements of the district population, rather than the health facility requirements. Districts, which, through the planning process, are considered to be underserved, would receive particular planning attention and above average allocation growth rates.

Development expenditure that is related to plans, and subsequent revenue implications, would be a major mechanism for this. Judgments as to which districts were underserved, and to what degree, would be formed on the basis of similar information to that in Model D (e.g. population and morbidity), but would not be tied formally into a formula. There would be similar implementation implications as to Model B, but an additional need for strengthened central planning capacity.

Model D: Population-based resource allocation

The final model involves the allocation of resources on the basis of population, possibly weighted by factors such as age, sex, specific health needs, density, cross-boundary flows and different costs of health care delivery. Under this, district managers set specific budgets within an overall allocation provided by the formula.

The main strength of this model lies in the potential to promote equity. Similar training requirements to those of the other models would be needed. However, the weaknesses in the current information system constitute a major constraint to this model.

Furthermore the political opposition from “losing” districts could be major obstacle. Each of the resource allocation models has advantages and disadvantages. While there was general support for Model D in principle, it may be felt that it would be impossible to introduce in the short-term, largely as a result of the lack of confidence in the data and associated political implications.

A progressive movement towards Model D can be chosen as the current incrementalist approach (Model A) is widely regarded as inappropriate. Development of better systems to meet the operating requirements of current facilities (Model B) would improve their technical efficiency and engender support in the system for the budgeting process. However, it may be recognized that this should only be an intermediate step since this, by itself, will not overcome the inefficient and inequitable

distribution of current primary and secondary level resources. Model C (through its strong emphasis on links between planning and budgeting) would allow a greater development of health needs sensitivity and responsiveness. The last stage in the progression towards full budgetary decentralization would involve the allocation of resources on the basis of population, weighted to incorporate other aspects of need (Model D).

Supporting components

There are various components required in order to develop the chosen allocative system, including those discussed below:

Improved information

As has been suggested by many that information systems appropriate to the development of a decentralized resource allocation system may not be available and will need to be developed through both routine data collection and research.

Studies have to be undertaken to develop a range of unit costs of routine activities in primary level facilities and district hospitals. The first of these studies would provide important information on the actual costs and “standard” levels of resources for primary facilities, taking account of utilization, case mix and other district level costs such as supervision and monitoring.

The difference between actual costs and standard requirements gives an indication of the “funding gap” to be filled if services are to run at an improved level of efficiency under Model B. Differential funding needs can be calculated on a district basis and under-funding of existing facilities occurring in the primary health sector can now be estimated.

This would permit the use of a policy of differential growth (based on the relative size of the gap) to under-resourced areas, rather than achieving resource shifts by cutting absolute allocations to “over”-resourced areas. This, it may be hoped, would minimize political opposition from “losing” districts.

Decentralization is often interpreted as a weakening of the central position. Instead, a change in role is needed, with concomitant energy put into a redevelopment of this role. Annual guidelines would provide specific guidance on service policy, and broad service delivery targets. All these elements are combined to form the district planning and budgeting guidelines, designed to be issued annually to budget holders by the central health-planning unit. In developing these it is proposed, inter alia, that: no district would be allowed to suffer a real net loss in resource levels; targets would be set to guide managers in the line item allocation of funds within their overall budget: in particular, these would focus on increasing the size of the non-salary budget; hospitals and central programmes would receive increases in line with inflation.

Development of district planning and budgeting systems.

One of the key rationales for the development of a decentralized system is the ability to develop plans for districts based on their specific needs, within an overall policy envelope. A district planning cycle would enable district officers to relate their identified health problems to implementable solutions. Service managers are to be encouraged to define objectives linked to interventions and activities for the coming three years.

Using the resource guidelines and financial information, they are then able to develop more rational and appropriate development and revenue budgets. These budgets can then be submitted to the centre for checking and consolidation prior to submission to the Ministry of Finance.

Gradualism not a complete overturn

The above section has outlined the technical work to be carried out to develop an improved allocative system, consistent with the stated decentralization aims. District plans and development budgets are to be developed on pilot basis in selected districts. Adequate time is to be given set to prepare and to submit a worked proposal. By concentrating resources on a limited number of districts it would be possible to provide greater support for the development of their budgeting and planning capacity. However, the general problem of frequent staff transfers should be avoided.

Furthermore, it is to be ensured that the concentration on trial districts may not give rise to suspicions that the allocation system might favour such districts in terms of the overall level of resources.

One useful framework for analysis of the sort of policy changes is to assess not only the policy content but also the context, processes, and actors. The focus of the work in the area should not only be on the content of the reform to the allocative and budget system, with considerable attention being paid to alternative models and their technical robustness, but also the context in which the reforms are being proposed, paying particular attention to the wider government planning and budgeting systems, information availability, and skill levels.

Changes in the Decision Making Culture

The culture of centralized decision-making and an attendant procedurally driven bureaucracy, coupled with the frequent transfer of staff, means that decentralization both challenges the organizational and management culture and is in fact high risk, albeit with high potential returns in terms of health impact.

The process of change to a new system requires support at all levels. In designing, it has to be always recognized the sources of resistance to decentralization broadly, and budgeting and resource allocation in particular. The level and sources of resistance to new systems would not be underestimated. Various actors can be identified as perceiving the

process as threatening. These include the following: the senior professionals in the Health Directorate concerned at a loss of role, status and power; clerical staff currently responsible for centralized budgeting concerned about the development of a system which may sideline them; and other central departments, most importantly the Ministry of Finance, concerned about the potential dangers of decentralization.

In addition, politicians able to use the current allocative system as a means of maintaining a political base may be resistant. Underpinning all of this is the critical issue as to whether there is shared understanding of and genuine support for equity, the main driving force behind a needs based resource allocation system.

First, it is easy to underestimate the various sources and depth of resistance. Greater attention needs to be given to the political dimensions of such projects, to seek ownership of the process of change. While resource allocation may appear as a “technical” issue, it clearly is much more than that.

Furthermore, the type of changes involved in a new resource allocation system may be viewed as technically challenging by staff with little management, let alone economic, training and as such resisted. Under such circumstances, it is to be recognized that the processes of change may need to be slower to develop a critical mass for change. This unfortunately, does not accord easily with the time horizons of most projects.

Second, it needs to be recognized that, in decentralization, as much attention needs to be given to supporting the necessary changes at the centre as at the periphery. While the district staff embraced the technical proposals, the major resistance was encountered at the centre.

Third, it is worth recognizing the difficulty of reforming one element of the public sector in isolation. Many of the problems faced by the health sector were shared by, or arose from, other sectors. It is certainly arguable that single-sector reform may not be feasible, though it can also be argued that a single-sector “lead” may be necessary to pilot new government-wide approaches.

Within the health sector itself, it may be that in areas such as resource allocation reform, changes need to be introduced simultaneously across the system rather than through trial districts.

Review Questions

1. Which factors account for most of the health improvements in the 20th century?
2. What are the social and economic challenges that result from different population age structures?
3. How are major health risks changing for different groups of countries?
4. Suggest appropriate public policy towards the reform of the health sector with special emphasis on public expenditure policies.

Further Readings

1. Michael S. Teitelbaum, 'Population and Development : Is a consensus possible?', *Foreign Affairs*, July 1974.
2. Timothy King and Allan Kelley, *The New Population Debate: Two Views on Population Growth and Economic Development*, Population Trend and Public Policy Paper No. 7, Population Reference Bureau, Washington D.C., 1985.
3. R.H. Cassen, 'Population and Development: A Survey', *World Development* 4, nos.10-11, October 1976.
4. Mason ,K. O. and Taj, A.M.(1986) 'Gender Differences in Reproductive Orientation: A Review of Existing Knowledge in Developing Counties', Paper Prepared for Conference of Population Association of America.
5. Schultz, T.P.,(1971), 'An Economic Perspective on Population Growth', in: *Rapid Population Growth*, Vol.2.Baltimore, MD: John Hopkins University Press.
6. Schultz, T.P.,(1981), *Economics of Population*. Reading, MA: Addison-Wesley Publishing Company.
7. Srinivason, G. (1983),'Population Growth and Economic Development', *Journal of Policy Modeling*.
8. Barakat, 1997, " Governance in Health Sector," in Sobhan, R (ed) *The Crisis of Governance*, Dhaka: Centre for Policy Dialogue and University Press Limited.
9. DHSS, Resource Allocation Working Party, *Sharing Resources for Health in England*. DHSS, London, 1976.
10. Green, Andrew, B. Ali, A. Naeem, and D. Ross, *Resource allocation and budgetary mechanisms for decentralized health systems:*

experiences from Balochistan, Pakistan, *Bulletin of the World Health Organization*, 2000, 78 (8)

11. Health Economics Unit, "Public Expenditure Review of the Health and Population Sector 1998-1999," Health Economics Unit, Ministry of Health and Family Welfare, Dhaka, January 2000.
12. Health Economics Unit and Management Accounting Unit, "Public Expenditure Review of the Health and Population Sector Program 1999-2000," Health Economics Unit, Ministry of Health and Family Welfare, Dhaka, February 2000.
13. Health Economics Unit and Management Accounting Unit, "Public Expenditure Review of the Health and Population Sector Programme 2000-2001," HEU and MAU, Ministry of Health and Family Welfare, October, 2001
14. Health Economics Unit, Bangladesh National Health Account 1996/97, Dhaka, Ministry of Health and Family Welfare, November 1998.
15. NIPORT, Bangladesh Demographic and Health Survey 1999-2000, Dhaka, National Institute of Population Research and Training (NIPORT) et al, May 2001.
16. Islam, M and A Barakat, Revenue Expenditure of the unproductive Sector in the Budget of Bangladesh versus Human Development: A Concept paper, Bangladesh Economics Association, June 2001
17. Killingsworth, J "Unofficial Fees at Health Care Facilities in Bangladesh: Price Equity and Institutional Issues," Health Economics Unit, MOHFW, September 1997
18. Rabbani AKM, Hosain, and S Islam, AKMT. Health Care Expenditures in Bangladesh. BBS. Dhaka. October 1997.
19. Rahman, A "Resource Allocation in Health Sector Bangladesh: A case study of Medical and Surgical Requisites," Health Economics Unit, Dhaka, Ministry of Health and Family Welfare, 2000
20. WHO, Regional Health Report 1997, New Delhi, WHO Southeast Asia Region, 1997.
21. WHO, Health situation in the Southeast Asia region 1994-1997, New Delhi, WHO Regional office for Southeast Asia, 1999.
22. World Bank, Health Futures in Bangladesh: Some Key Issues and Options, Dhaka, June 2001.

Lesson 6: Education

Objectives:

It is widely recognised that more educated men and women receive more earnings and produce more output than do the less educated in a wide range of activities. If these relationships are casual, and education enhances the productivity and earnings of labour, it is not surprising that governments have been willing to expend a substantial fraction of national income on public education; neither is it hard to understand why parents have set aside an increasing amount of their private disposable income to school their children, foregoing the productive contribution the children would have made to family income had they not attended school. Education is widely viewed as a public good which increases the efficiency of economic and political institutions. Moreover education is always valued by individuals as and society as consumption good and means to preserve and transfer cultural values to subsequent generation.

After studying this lesson, you will be able to:

- Explain the similarities and differences among human capital and physical capital.
- Describe the best ways to build a country's human capital.
- Explain the main obstacles to universal primary education for low-income countries.

Education and Human Capital

Most human capital is built up through education or training that increases a person's economic productivity- that is, enables him or her to earn a higher income. Governments, workers, and employers invest in human capital by devoting money and time to education and training (to accumulating knowledge and skills). Like any other investment, these investments in human capital require sacrifices. People agree to make these sacrifices if they expect to be rewarded with additional income in the future.

Governments spend public funds on education because they believe that a better-educated population will contribute to faster development. Employers pay for employee training because they expect to cover their costs and gain additional profits from increased productivity. And individuals are often prepared to spend time and money to get education and training, since in most countries people with better education and skills earn more. Educated and skilled people are usually able to deliver more output or output that is more valuable in the marketplace, and their employers tend to recognize that fact with higher wages.

Economic returns to education are not always the same, however. Returns to education may be lower if:

- The quality of education is low or knowledge and skills acquired at school do not match market demand. In this case investments in human capital were not efficient enough, resulting in less human capital and lower returns to individuals and society.
- There is insufficient demand for human capital because of slow economic growth. In this case workers' human capital may be underused and underrewarded.
- Workers with lower and higher education and skills are deliberately paid similar wages to preserve a relative equality of earnings- as used to happen in countries with centrally planned economies. These distortions in relative wages are being eliminated as part of these countries' transition to market economies.

The national stock of human capital and its rate of increase are critical to a country's level and rate of economic development, primarily because human capital is the most important determinant of a country's ability to produce and adopt technological innovations. But investing in human capital, although extremely important, is not sufficient for rapid economic growth. Such investment must be accompanied by the right development strategy.

Most governments are playing an increasingly active role in providing education. Differences in public spending on education (relative to GDP) across countries reflect differences in government efforts to increase national stocks of human capital. Governments of developing countries devote a larger share of their GDP to education today than they did in 1980. But this share is still smaller than that in developed countries: 3.4 percent of GDP in low-income countries and 4.4 percent in middle-income countries compared with 5.6 percent in high-income countries. The absolute gap between per capita public spending on education in developed and developing countries. This gap is an important manifestation of the vicious circle of poverty described : low per capita income inhibits investment in human (as well as physical) capital, slows productivity growth, and so prevents per capita income from increasing significantly.

Data on public education spending does not, however, paint a complete picture of investment in human capital because in many countries private spending on education is considerable. Around the world, the difference between public and private spending on education varies enormously and does not seem to be correlated with a country's average income. Among low-income countries, for example, the share of private spending on education ranges from about 20 percent in Sri Lanka to 60 percent in Uganda and Vietnam, while among high-income countries it ranges from 5 percent in Austria to 50 percent in Switzerland.

There are, however, certain patterns in the balance between public and private spending on different levels of education. Most governments are committed to providing free primary and often secondary education

because it is believed that not just individuals but the entire country benefits significantly when most of its citizens can read, write, and fully participate in social and economic life. At the same time, tertiary education institutions, both private and public, usually charge tuition, because more of the benefits from this level of education are believed to accrue to graduates (in the form of much higher future earnings) rather than to society at large.

In vocational education, employers often play an important role in providing on-the-job training for employees and in financing training in vocational schools. Governments try to encourage employers' involvement in order to save public funds and to link vocational education to the needs of the labour market. Specific work skills are best developed through training during employment, especially in jobs involving substantial technological change.

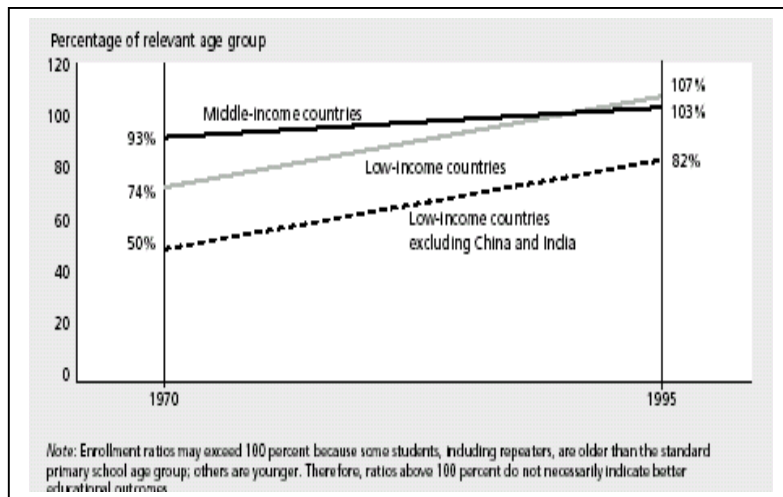
Public financing of vocational training is generally considered justified when employer training capacity is weak (as in small and medium-size firms) or absent (as with retraining for unemployed workers). High-quality general pre-employment education is the best guarantee of an individual's ability to learn new skills throughout a career and of employers' willingness to invest in that individual's professional training. Most important, employees must be able to communicate clearly in writing and to use mathematics and science skills to diagnose and solve problems.

Primary Education and Literacy

Attending primary school helps children acquire basic literacy and numeracy as well as other knowledge and skills needed for their future education. In low-income countries primary education in itself often improves the welfare of the poor by making them more productive workers, enabling them to learn new skills throughout their working lives, and reducing the risk of unemployment. In addition, primary education- especially for girls and women- leads to healthier and smaller families and fewer infant deaths.

Despite rapid growth in the number of children of primary school age, since 1970 developing countries have succeeded in sharply increasing the percentage of children enrolled in primary school. But universal primary education, a goal being pursued by most governments of developing countries, is still far from being achieved in many of them. Low enrolments in many low-income countries may signal inadequacies in education system capacity as well as social conditions that prevent children from enrolling.

Primary School Enrollment, 1970 and 1995



Source: Soubotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000

Because economic and social returns to society are known to be higher for primary education than for other levels of study, most governments are committed to providing free access to primary school to all children. But in low-income countries the public funds available for this purpose are often insufficient to meet the increasing demand of rapidly growing populations. These funds also tend to be allocated inequitably, with better education opportunities often provided to urban children relative to rural children, to well-off children relative to poor children, and to boys relative to girls. In some countries public financing of education favors the higher levels of study, benefiting mostly older, better-off children and thus exacerbating social inequity.

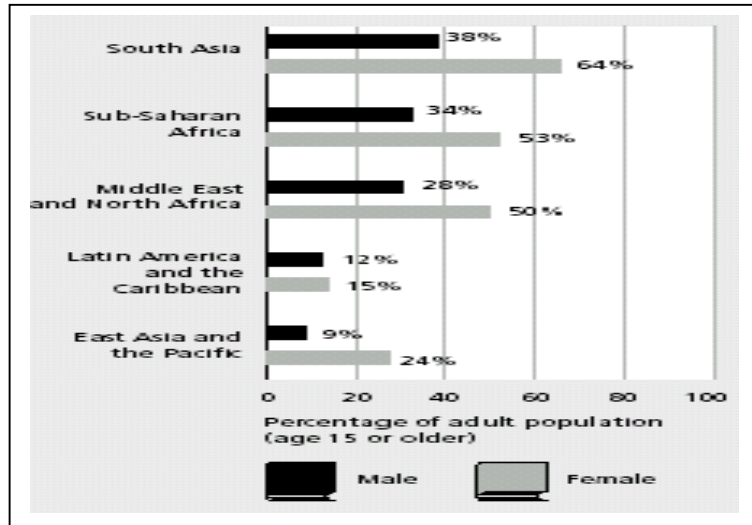
Even when primary education is accessible, poor children may be unable to benefit from it. Many of these children must work rather than attend school. Premature and extensive involvement in work damages their health and impedes development of their social skills, decreasing their future earning power as adults and perpetuating the vicious circle of poverty.

In addition, primary school enrollments are generally lower for girls than for boys. This gender gap is widest in South Asia, the Middle East, and Sub-Saharan Africa. The gap reflects cultural norms, early child-bearing, limited employment opportunities for women, and traditional expectations of girls' larger contribution to household work. As a result, of the 900 million adults in developing countries who are illiterate (nearly one in three), almost two-thirds are women.

Note that child labour is known to be a poverty issue- that is, its incidence declines as per capita income rises. That means that further economic growth will tend to remove this obstacle to universal primary education. By contrast, gender disparities in school enrollments are not

correlated with overall living standards, so countries do not just "grow out of them." Narrowing the gender gap requires supportive national policies, such as reducing the direct and indirect costs of girls' schooling for their parents and building more schools for girls in education systems that are segregated by sex.

Male and female enrolment, 1995

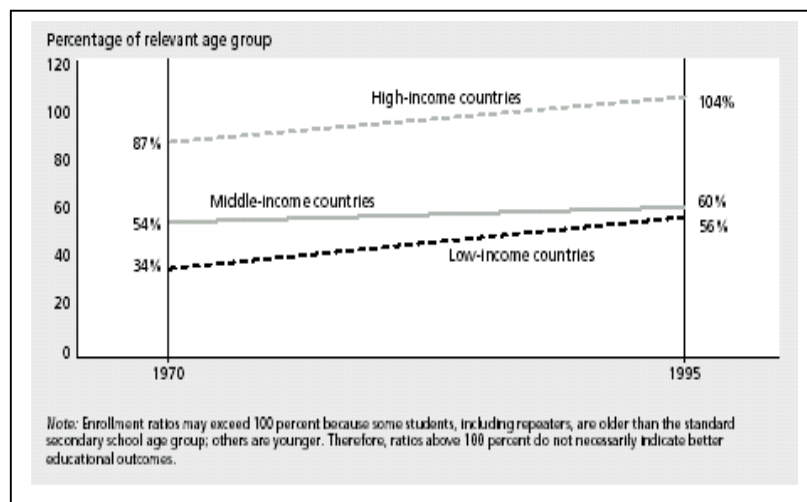


Source: Soubotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000.

Issues in Secondary and Tertiary Education

In most developing countries enrollment in secondary schools is much lower than in primary schools. Although the situation has been improving over the past few decades, on average less than 60 percent of children of secondary school age in low- and middle-income countries are enrolled, while in high-income countries secondary education has become almost universal.

Secondary school enrolment, 1980 and 1995

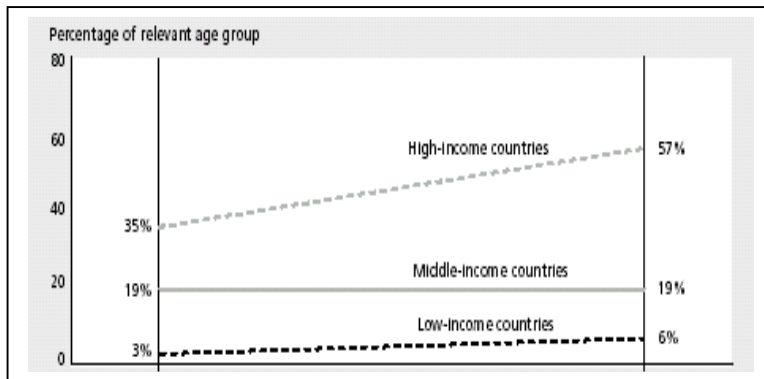


Source: Soubotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000.

Among the world regions, Sub-Saharan Africa has the largest share of children not enrolled in secondary school. Child labour remains the most formidable obstacle to education for children in low-income countries. According to available data, almost one-third of children 10-14 are in the labour force in low-income countries (excluding China and India), while in many Sub-Saharan countries this proportion is one-half. In fact, the situation may be even worse- in many countries data on child labour are underreported or not reported at all because officially the problem is presumed not to exist.

The gap between developed and developing countries is particularly wide in tertiary education. In high-income countries tertiary enrollments have increased rapidly since 1980, but in low- and middle-income countries they have improved only slightly.

Tertiary education enrolment, 1980 and 1995



Source: Soubbotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000

The number of students enrolled at a level of study does not indicate the quality of their education and thus provides only a rough idea of a country's educational achievements. To generate economic returns, education and training have to meet the ever-changing demands of the labor market- that is, they have to equip graduates with the knowledge and skills needed at each stage of a country's economic development. For example, countries moving from planned to market economies usually need more people trained in economics and business management to work in emerging private sectors as well as in reformed public sectors. Today's information revolution requires more people with computer skills, and globalization has increased the demand for foreign language skills. Overall, innovative people are needed everywhere, and an education system that fails to develop this quality in its graduates can hardly be considered fully effective.

The Issues at Stake in Education System of Bangladesh: A Summary Primary

Four main areas, which have been identified in several reviews, but lacked strategic response from the government, though planning documents have repeatedly stressed the issues:

- inequitable access to schooling;
- poor quality, including low standards of teacher development, insufficient instruction time, inadequate instructional materials and lack of system of assessing the students;
- weak management and monitoring capacity which hinder effective planning and decision making; and
- optimal allocation of resources, reflecting contextual reality and pattern of income distribution.

The *inequitable access* to primary education is omnipresent: about 10% of eligible children do not enroll, including about half of the children of the very poor and about 40% of those who enter drop out before completing grade 5. It may be argued that strategies pursued for closing the gap has not been able to address the issue of reducing the direct and opportunity costs of school attendance. It is remain to be seen how effective the government's programme for accommodating the hard-to-reach 10 percent by just attaching importance on construction programme to cover the under-served areas of the country, without addressing the structural features including income poverty and inequality.

It is argued that early childhood programmes hold special promise for enrolling the economically hard-to-reach. However, given the budget constraint, how the government would embark on such programme in massive scale since early childhood education is expensive. One way of addressing such would be to employ donors-advised targeting approach, but that assumes the target population in isolation, and essentially has spillover effects on the community and may hinder generating externalities to the community. The targeting may be favoured for its short-term and tangible benefit, but the personal gain may not be transmitted into a capability and may not induce a comprehensive development.

Inference could be drawn that the *quality of education* was far below the target levels. The competencies achieved by the pupils of different grades in different subjects were far behind those prescribed in the national curricula as grade and subject wise competencies and also as terminal competencies.

Short teacher-student contact hour is an important issue, but a more vital issue is the *effective use of the available time* and resources in a planned manner. The total number of instructional hours in grades one and two is very low compared to other Asian countries (444 versus 1,100 in

Indonesia and 1,235 in China). There is evidence that even at the primary level in both rural and urban Bangladesh, there is a widespread prevalence of private coaching, Tk 502 for boys per annum and Tk. 540 for girls per annum (World Bank, 2001). This reflects the inadequacy of instructional time in the classroom for which the teachers cannot entirely be blamed since they are burdened with other duties¹⁷, which point to a compartmentalised vision of development and lack of coordination. This also directs the absence of guidelines for the teachers on the use of the available time and of keeping an eye on the school performance and the field level supervisions, which appears to be a cause of poor performance. The present system does not ensure accountability of the teachers through instituting mechanism for standards, but such system on its own would be far from optimal if the teachers fail to optimise their outcome in terms of their marginal product of labour and other incentives as well as removal of structural rigidities which all together warrants a comprehensive package not a segmented one.

Unfavourable teacher-student ratio is an obstacle to ensuring the quality of education in primary government schools. In most cases the number of students in attendance lags much behind the number enrolled. *Although increasing the universal coverage is the goal, a parallel effort is missing* towards remedial measures for irregular and low attendance, without reduction of which the quality of education would remain a far cry. The prevalent teaching-learning strategies, assessment techniques, management and supervision system, and classroom arrangement cannot be said conducive to enhance the quality of education.

The deteriorating quality and standards logically pinpoints missing in the curricula coupled with appropriateness of the teacher education programme. In the primary sector, what is currently taught prima facie cannot be argued that it warrants relevance to life in a democracy and a global competitive market economy. In theory or in isolation efforts are put to design curriculum carefully (a number of donor-assisted projects have been undertaken over the years for the said purpose), but the issue of delivery in the classroom and what students actually learn from it remains overlooked or a passing care is inhaled. The curriculum needs reworking both on the cognitive front and in the domain of attitudes and values, essentially reflecting the institutional, historical and cultural reality on the one hand while servicing the demand of labour market on the other.

The traditional method of teaching has been rewarding memorizing students at the expense of analysis and problem solving, not to speak of the ability to learn on their own. This is an institutional issue embedded in deep rooted culture wherein beneficiaries and parents view education

¹⁷ Primary teachers tend to spend a considerable portion of their time conducting other works such as collecting data on child surveys, health and immunisation work, sanitation and mobilization, the Total Literacy movement, food distribution in the Food for Education programme as well as census and voter ID distribution.

as a stepping stone, not as an investment which may provide improvements in their life circumstances.

One of the major weaknesses of the education sector is management. The primary education management should be far better than what is existing now, in terms of defining strategic objectives, mobilizing and allocating resources, monitoring implementation to achieve priority goals and finding more equitable ways of distributing resources by geographical region, gender and income groups. Capacity within the government to address sector wise issues is weak. PMED and other implementing government agencies are suffering from poor planning, compounded by weak data, highly centralized decision-making etc.

The School Management Committees (SMCs) and Parent Teachers Association (PTAs), which are the part of school decentralization process and are there to augment the democratic governance of school administration, do not enjoy the administrative and financial resources needed to function effectively. The role of the members of the SMCs is not defined beyond that of the chairperson.

If financing of education and training is decomposed, it conspicuous that spending goes almost exclusively for salary of the teachers and little is left for spending on essential pedagogical inputs. The cost per student in primary schools and non-government secondary schools and colleges are among the lowest in the world, both absolutely and in relation to GDP/capita. Private spending on education is enormous, but is not directed at the most fruitful investments, particularly private out-of-school coaching for examinations that starts even at the primary level. A financial strategy has to reworked focusing increased budgetary allocations and freeing resources through improved efficiency.

In addition to Initiating a primary education system that attracts and retains more students in the system, a complementary way would be to effectualise mass education in order to closing the gap in coverage of basic education. The optimal role for NFE programmes would have been to shift to new areas such as continuing education and skills for income generation to sustain investments in literacy were there success of EFA.

Secondary Education

A Fractured Vision: A vision of education as a fundamental instrument of social change has so far not been recognized in the successive education commission reports and development plans, even though the importance of education for socio-economic development was widely recognized. This is largely because in the absence of an ideologically driven social vision education was viewed as a sector of incremental change rather than area of re-creation of individuals through a process of re-examination of knowledge and reintegration of individuals in the nation. This is attested by the fact that *the form and content of education was inherited and adjusted marginally over time as if social relations could remain ambivalent to the ideological formation of the state*. Thus the educational system of Bangladesh was never based on the shape of

social relations and the desired social change for radical transformation from a feudal set up to a modernist set up, capitalist or otherwise [Ahmed, 1997].

Gearing towards Income Distributive Policies: The principle of establishing schools on the basis of affordability or ability to pay hypothesis, not where the most needy children live, has resulted in an unequal access. Major disparities reign in, among existing schools, in provision of inputs, such as allocation of trained teachers, class sizes and facilities. *The access to poorer students is further perturbed by fees for out-of-class tutoring* – often by the same teachers – a common feature throughout secondary education to prepare for the final examinations; these has manifested a lower intake from economically disadvantaged sections as the tutoring costs private households substantially more than public tuition fees.

Demand-Supply Mismatch: The number of secondary schools has not expanded adequately to accommodate the completers of the primary system, resulting in a very common phenomenon of overcrowding. Furthermore, recent expansion of the secondary school system has not been accompanied by a commensurate increase of facilities or the teaching force. As a result, the average has burgeoned in number of students per teacher and per class. The system faces an acute shortage of facilities and the average number of students per teacher is strikingly disparate.

Overcrowding in secondary classrooms has detrimental effects on the quality of teaching and learning achievements. Often classes are crammed with 100 or more students. Lack of adequate classroom space contributes to overcrowding.

Reordering Curricula: The secondary education lacks no independent purpose of its own excepting ration access to higher levels of the system. Fewer than one in ten entrants manages to complete the system and proceed to higher education; the other nine being unable to advance in the academic system leave the secondary system ill prepared for the labour market —mainly in the informal sector. Moreover, those that do continue their studies have not been well prepared in terms of thinking and analytical skills. One particular issue is the sharply declining proportion of students in secondary education who take science.

Restructuring Incentives for Quality: Poor quality is the product of multiple factors such as large class sizes, inadequately trained teachers, lack of self-teaching materials, curricula with excessive objectives and un-pragmatic textbooks. School owners are driven by the need to maximize fee income and teachers seek to maximize the out-of-school income. The government subventions are not linked to performance nor there is effective academic supervision at the local level, leaving the schools unaccountable for results, nor there are incentives for quality within the system.

Inadequate Financing: The factor that constrains Bangladesh's capacity to meet the need for improving coverage, quality and efficiency in the education sector is the inadequate availability and inefficient use of financial resources. It is quite clear that the requisite finance for upgrading quality at a sustainable level is not available, although the government has increased its allocation to the education sector.

The above mentioned review of state of the art indicate **seven main areas**, some of which have been identified in several reviews, but never addressed through a package, though mentions are made in plan, but based on ideological dogmas, especially those of the pundits of multilateral agencies:

- Not Affiliation is Enough,
- Redistributive mechanisms or devolution of administrative responsibilities,
- Governmental Control versus Fiscal Autonomy
- Rot in External Efficiency
- Widened Knowledge Gap
- Managing costs and improving efficiency
- Increased Inequality

Not Affiliation is Enough: The proliferation of degree colleges, without adequate control over standards, has eroded quality. Class sizes average 70 students in degree colleges, and teaching staff are reportedly below standard in subject-matter knowledge and teaching skills. Teaching materials are in short of supply. The examination system favours factual knowledge over higher-order skills and is subject to wide spread unfair practices.

The degree colleges are placed under the National University, but without its jurisdiction in resource allocation, consolidation of manpower and investment in physical facilities, thus hindering the colleges to provide for higher education at a level of quality not too far below the universities. This division of labour would reduce considerable pressure on the formal policy and managerial responsibilities currently overloading the Ministry of Education. But in reality the National University is unable to perform this job of expansion of higher education with quality. To address such changes pre-suppose training of managers, planners and evaluators at various levels, so that management and planning information could be guaranteed in time and acted upon effectively.

Governmental Control versus Fiscal Autonomy: The management of education in tertiary level sees a tension between making it a governmental institution instead of autonomous public institutions, brewing out politicisation of activities including appointments and management of universities and campus terrorism. The dependence of resources on the government and resultant absence of devolution, though statutorily enacted, has crippled the university system. *The basic premise underlying such a process of devolution is that fiscal autonomy with*

resources will encourage accountability over the performance of university level institutions. This is, however, prone to uncertainty due to paucity of untrained educational managers and partisanship of fund dependent political leaders. [Ahmed, 1997].

Higher Education Generates Higher Externalities: In recent years there has surfaced a body of economic literature dealing with economics of knowledge and economics of information. Education and research is at the heart of this knowledge production system. One of *the major failures of the developing economies has been their inability to increase the share of their national budget and national investment in the production and distribution of knowledge.* On the contrary, the development partners are not inclined, to an extent opposed to increasing finance for tertiary education on the premise that rate of return is low and individuals should spend since it maximises her/his income opportunities, and to redirected towards the basic education in view of higher trade-off. It can be well advanced that under financing in the tertiary education, especially given the examples of newly industrialised economies, has choked the preparation of high level manpower for professional, technical and administrative positions in the labour market, generation of new knowledge through research and extension of that knowledge to the society at large. Furthermore, if the tertiary education is not well-funded from where would the good teachers come, much needed to revamp the quality of education across the board.

Rot in External Efficiency: The system is paralysed with problems of external efficiency such as distortions in the allocation of students by field of study; *structural rigidities that impede the flow of funds to open, close, expand, and contract courses in response to market demand; and inadequate research output* (research consumes only 0.5 to 1.5 percent of university budgets). Inadequate support for poor students is also an issue. A 1996 review estimated that poor households- that make up about half the population- receive only 15 percent of public spending on higher education; the remainder is allocated to non-poor households. Female students made up only one fourth of enrolments.

Widened Knowledge Gap: The gap in knowledge between Bangladesh universities and those in the advanced countries is widening, particularly in science-based disciplines. University managers complain universally about the absence of staff development programmes for keeping them up to date. Most institutions lack current periodicals, information technology and international linkages. Salaries account for about three fourths of all spending at university level; however *salaries are reportedly low, which leads to multiple employment and reduced dedication to teaching.*

Managing costs and improving efficiency: Low per student expenditure account for much of the low quality of degree colleges. Unit recurring expenditures in government degree colleges were only 13 percent of the level of those at universities. Per-student expenditures in non-government degree colleges were only half that, i.e., under 6 percent of the cost per student in public universities. *The allocation of funds*

within the system tends to be based on precedent or influence, not per capita averages by field of study and result in wide variation in costs per student. Moreover, the beneficiaries of higher education tend not to share the costs. University tuition charges make up less than 1 percent of the costs per students and have been declining. Government provides about 95 percent of total public university costs.

Increased Inequality: At the tertiary level, the longitudinal survey of admission of medical colleges, engineering university and Dhaka University indicates that an increasingly larger proportion of students come from a few selected educational institutions in the urban areas and form the higher socio-economic groups, indicated more by occupation than income. This percentage is high despite the presence of a form of quota system for the less privileged, introduced by the government, applicable for medical colleges. *This raises the issue of disparity in standards in feeder institutions and the ability to incur 'private' costs for "quality" education.* Such 'private' costs include the ability to pay for private tuition and to purchase school books. Inequity in access to quality higher education through an inability to incur such 'private' costs appears to be instrumental in creating disparity in the educational performance and thence in accessing quality higher education as well as preferred jobs in the labour market. There has been no significant policy intervention in favour of those placed disadvantageously to counter the pronounced inequity in paying for such 'private' costs.

Redistributive mechanisms or devolution of administrative responsibilities: The possibility of reallocation of resources in favour of education is, thus, constrained by pre-existence of existing governmental structures as much of the revenue budget goes for salary and wages and much of the development budget is pre-empted by ongoing infrastructural projects. *Countries in the developed and developing world have responded to vertical imbalance through redistributive mechanisms or devolution of administrative responsibilities, or a combination of both.* The alternative fiscal possibilities that have surfaced suggest the need for efficiency related fiscal mechanisms, such as, targeting assistance to finance specific categories of students through a carefully focused social and educational achievement parameters, which could form a basis to promote individual, institutional and systemic efficiency. Suggestions for the provisional allocation and use of funds to offset backwardness of areas where local finance is most difficult to come by have also been suggested under a decentralized administrative arrangement.

Skill Development: Technical and Vocational Education

If vocational training and education is to cater labour markets, it needs to capture the traditions and values of the sector and the society within which it operates. First, the training provision has to be *need based*: i.e. it has to be based on an understanding of the kinds of competencies people want in order to optimise their potential. Second, the training has to be *context specific*: i.e. it has to capture the socio-economic and cultural contexts within which people in the informal sector work. Often optimal

outcome cannot be obtained as vocational education and training are conceived from a narrow perspective of human capital. The human capital approach bases on the individualistic notion and ignores the wider social context within which much learning take place, as well as the relationships - personal and institutional - which actually constitute the vehicles or channels through which learning takes place. Third, the provision of skill formation has to embody *coping strategy*: how people cope in order to sustain their livelihood strategies. It is accentuated by the fact that the concern is not simply one of employment but also of attaining decent livelihood and right to work for all.

In a rapidly changing world, modes of education, training and skill development must integrate the process of technological change, required levels of skills and changes in organisation of work. *There is little place for fragmented strategies*. Emphases need to be laid on conceptual learning, technological literacy, cross-disciplinary relationships, worker flexibility and smooth transfer of skills.

The present relationship between skill formation and the labour market indicates that training has to be planned and monitored closely in related segments, as it does not necessarily lead to related jobs for which the training is intended. It is important that training institutions and enterprises must work together and complement each other's efforts. The relationship between training institutions and jobs is complex and problematic. It cannot be assumed that training will lead to related jobs nor those jobs needing specialised skills will be met by training programmes. Thus, the main issue is not one of diversification and vocationalisation, nor is the issue only an economic one (earning opportunities, better jobs), but one of how to integrate science, technology and socio-technical reality of working life into the curriculum, and how to combine education with productive work (Corvalan, 1988)

What is urgently needed now is a broader view of education and training that would link schooling with work, i.e. the system has to evolve to provide people with opportunities for continuing acquisition of knowledge and skills. There has been much debate to compare the short-term and narrow skills development approach of the non-formal sector and those of the long-term general skills development of the formal sector. *Life-long continuing education* now emerges as the main component of the broader view of education, training and skill development. The broader view bases on the premise that a system of skill formation is difficult, if not impossible, to be instituted without a solid educational base at foundation and basic levels.

General and vocational competencies are regarded as interrelated dimensions of vocational learning. Equally important are personal and social competencies. In addition to cognitive competencies there is a need for acquiring 'learning to learn' competencies. Of course, specialised skills and knowledge are needed; the issue is however one of the balances between them and wider forms of knowledge (Krug, 1999).

The education and training system must guarantee sufficient flexibility in the organisation of the curriculum. In view of the increase in occupational and geographical mobility, it is also necessary to promote the acquisition of language skills. There is also a need to introduce elements of modularisation in learning. The system must be so structured as to allow transparency, diversity and flexibility.

Inter-linking Formal, Non-formal and Informal Learning

The envisaged system of skill formation demands the recognition of formal, non-formal and informal learning as equally valuable medium of the overall vocational learning process. While basic and primary school education is necessary for promoting cognitive competencies, non-formal basic education can be an alternative instrument to transmit competencies linked to economic activities. Studies have indicated that non-formal training programmes for the informal sector, including trade courses, survival training, apprentice training and other training measures within the framework of community development might be useful in the informal economy. The non-formal training programmes, nevertheless, should contain modules of basic and foundation levels. It is important to recognise informal learning experiences in the family and community and relate with learning domains.

Diversification of Training System

With the expansion of the informal economy, it is necessary that vocational training institutions reflect economic opportunities and respond to the competency requirements of the majority of the labour force, and undergo diversification to suit the needs of the expanded clientele. This requires restructuring in terms of the subject matter and re-designing of the learning processes. Diversification also implies promotion of self-employment by tying learning processes with opportunities that help gain competencies and income benefit.

An inverse relationship between the employment potential and level of competencies is found in the informal sector, and a growing number of self-employment is losing out in competition due to lack of facilities needed to edge out. As the informal and formal labour markets are linked through forward and backward linkages, curriculum development has to be conducted on a system-wide rather than a segmented basis, and the training should be diversified to promote work-based learning.

Reorientation of Curriculum

Vocationalising the School Curriculum: The National Curriculum and Textbook Board (NCTB) offers general curriculum for SSC & HSC. The curriculum emphasised mainly on building foundation for higher studies in various discipline. The school curriculum can include various vocational courses as compulsory or optional. This way the students can get some skill in various engineering or non-engineering trades. Many students of the country have now not been able to get higher studies in universities and colleges. So vocationalising the school curriculum may create job opportunity for the drop out students. The NCTB can consider

the proposal of vocationalising the school curriculum for the skill development of the workers in the urban informal sector in Bangladesh. This may help formal and informal sector workers to get education at a minimum cost as the existing school and college infrastructure can be used for the purpose. This will not only benefit the drop out students but also create good opportunity for enhancing the job related or market-oriented competencies of the labour forces.

Matching the Market Demand: There is a direct correlation between the quality of trained workers and the implementation of productivity improvement programmes. Relevant productivity related subjects should be incorporated in the curricula of the VTIs /TTCs. Efforts should be made for conducting productivity -biased on-the-job training programmes. The course curricula of the training institutes should be designed in a way that they are flexible enough to respond to the changed situation of the market. Practical and need-based training should be strengthened.

It is evident that achieving an occupational match will increase productivity and returns. Development of a comprehensive labour market information system would be a positive measure in resolving the problem.

Use of Communication and Information Technology: The information and communication technology can play an important role in promoting the provision of training, education and skill development for decent work in the informal sector. Although the IT sector is recognised as a thrust sector its substantive development has not yet been attained.

Efficient Allocation for Sustainable Education

The allocation rules that underlie the observed pattern of revenue and development expenditures on education in Bangladesh appear to be rather ad-hoc. There is little evidence of planning either in the revenue or development budget for education. Revenue expenditures appear to be set by precedent rather than rational planning and tend to follow the previous year's pattern. This is reflected in the stable shares of different sub-sectors in the education revenue budget.¹⁸

Under the current systems, Ministry of Finance in the end is the real policy makers, particularly in times of contraction. There is little point in improving the processes because in most cases

¹⁸ Development expenditures, however, show large variations in sub-sectoral shares. This is largely due to varying commitments of donor and lending agencies.

A model of Human Capital¹⁹:

The investment in education can be viewed as the formation of human capital that is a durable asset that returns a stream of services in to the future. The figure 3 shows the essential elements of the capital construct used to evaluate and choose among projects. Such an evaluation in effects compares cost and benefits (sum of the present value of the earning stream with each future receipt discounted depending on the time of its receipt. The ratio of present value *PV* to investment cost *C* can be compared across project. With diminishing marginal productivity investors adjust the investment to across projects, so the numerator adjusts over projects *i* and *j* such that

$$PV_i/C_i = PV_j/C_j$$

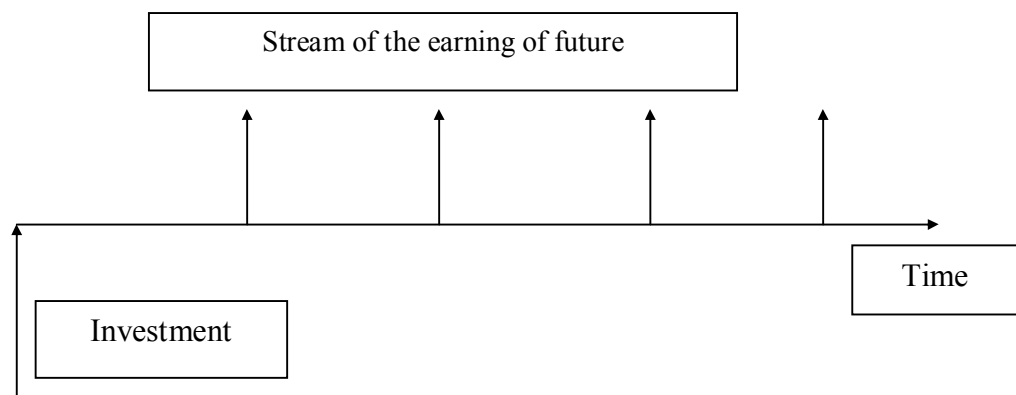


Figure3: The Human Capital Model

In reality an educational investment with low returns relative to its cost would not be under taken. The human capital model is useful to analyse the expenditure decision on intangible such as health and education.

Social and Private Benefit & Cost

The opportunity cost to a society resulting from the need to finance educational expenses at higher levels might be more productively used in other sectors of the economy and this is known as social cost of education. Social cost increases rapidly as students go for the higher studies; where as private cost increases more slowly. The widening gap between social and private cost provides an better stimulus to the demand for higher level than it does for the lower level. Educational demand therefore becomes increasingly exaggerated at the higher level and educational opportunities could be accommodated to these demands at the full social cost.

The following figure provides the divergence between private and social cost & benefits. It can be established that this divergence lead to a

¹⁹Kasiwal,P., *Development Economics*, South Western College Publishing, 1995.

misallocation of resources at the point where private interest exceeds the social interest.

Private Returns and Costs

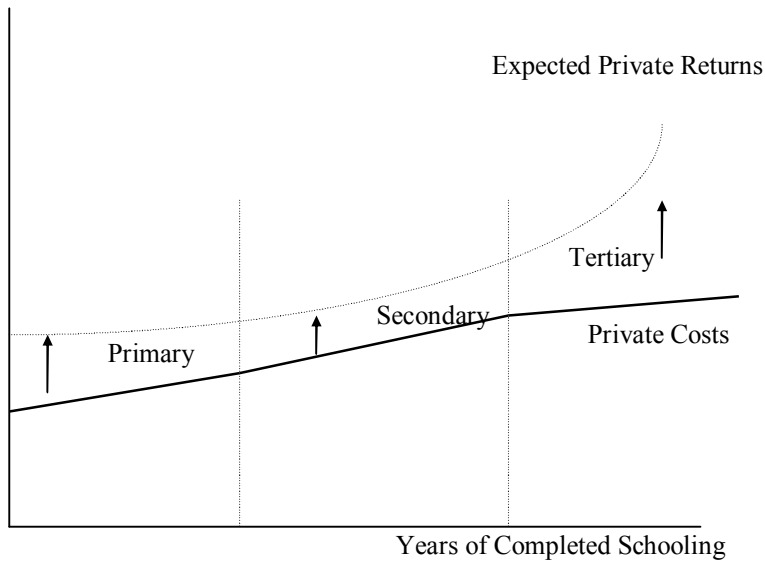


Figure 1:

Social Returns and Costs

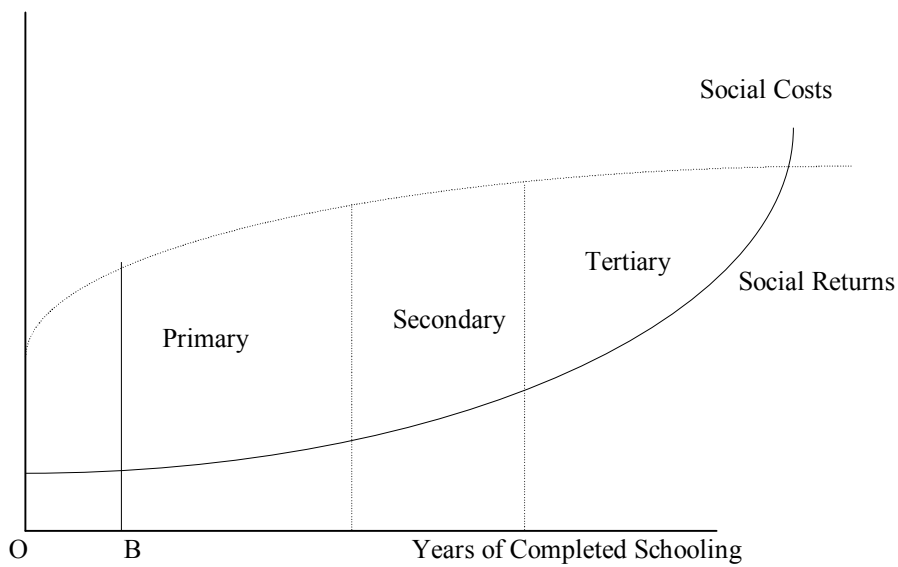


Figure 2

In figure 1 expected private returns to years of completed schooling are plotted against actual private cost. As a student complete more and more years of schooling his expected private returns grow at a much faster rate than his private costs. In order to maximise the difference between expected benefits and costs the optimal strategy for a student would be to secure as schooling as possible.

In figure 2 where social returns and costs are plotted against the years of schooling. The social benefit curves rises sharply at first that is reflecting the improved levels of productivity. Thereafter, the marginal social benefit of additional years of schooling increases but at a decreasing rate. On the other hand, the social cost curves shows a slow rate of growth for early years of schooling and then a much more rapid growth for higher levels of education. This rapid increase in the marginal social costs of post primary education is due both to the much more expensive capital and recurrent costs of higher education. So it follows that the one that maximises the social rate of return to educational investment would be one that focuses on providing all students with at least OB years of schooling. Beyond OB years marginal social costs exceed marginal social benefits so that additional education investment will yield a negative social rate of return. Thus it shows that there is a conflict between optimal private and social investment strategies.

It is quite inevitable that given subsidised or free education on the one hand and unrealistic income differentials on the other, a substantial gap between the demand for education and supply of educational opportunities must exist. Manipulating the supply of educational opportunities is not likely to close the gap.

To constitute the demand for education towards more realistic levels LDCs can strive to bring the private calculation of the benefits and costs associate with education closer to the social benefits and costs by:

- Reducing the income differentials between the modern and traditional sector and with in modern sector to ensure a more realistic appraisal of prospective benefits of education.
- Ensuring that minimum job specification do not overvalue education.
- Ensuring that wages are related to jobs and not to educational attainment.

The human resources of a nation that are largely responsible for its overall economic development and social development. To make maximum use of these resources the Third World Countries need to orient their education system towards the real requirements. Moreover, educational systems have a tendency to reinforce economic inequalities by promoting and then subsidising the education and hence the life time earning capacity of the better-off segments of the population. So it is attainable not only through providing the proper educational system but also a sound political system is required.

What is Education Worth? From Production Function to Institutional Capital²⁰

By ascribing all the productivity increments associated with new skills exclusively to education outlays and by neglecting the opportunity costs of children's time (Mason and Khandker, 1996), very high rates of returns to educational investments are routinely produced and publicized, thus contributing to neglect of social and community aspects of educational policy. Similarly, macro studies of the effects of education on the economy employ an aggregate production function model which assumes that differential wages offered to workers with different levels of formal schooling is an accurate proxy for the contribution of education to their productivity.

While intuitively appealing, the model does not consider the extent to which education plays a "certification" role which allocates workers within a relatively fixed distribution of jobs without creating them. In any event, wages reflect productivity only if labour markets are competitive and in equilibrium, a rare occurrence. Where workers compete for individual jobs in a queuing process, educational qualifications may have more weight in employment than may be justified by productivity considerations. One is reminded here of Mark Twain's warning that young people should not let schooling get in the way of their education.

Detailed studies seeking relevant evidence that education directly improves productivity have not been conclusive. On the other hand, contrasting sociological doctrines according to which education is only used for socialization and/or for sustaining class distinctions have not been convincingly confirmed by historical evidence (Rubinson and Browne, 1994).

Public education has three functions. First, a nation building function: the inculcation of civic virtues and the provision of talent needed for government service. Second, a social function: the strengthening of local communities and the creation of social capital. Third, a market oriented function: the production and delivery of technical, clerical and managerial skills needed by the economy. Confusion about these roles inevitably leads to faulty program designs and misunderstandings.

The prevailing capital theory model of human resources assesses education as if it were solely a market good. From this perspective, the primary educational production system is not properly organized as it flouts nearly all cherished free market principles. It is a near-monopoly and, where it is compulsory, it offers little scope for consumer choice. Pricing is seriously distorted by government intervention. Access is often universal rather than merit based.

Yet, analytical focus on such aspects may be misplaced if free primary schooling along with roads and the rudiments of a local administration is

²⁰ Picciotto Robert "What is Education Worth? From Production Function to Institutional Capital" December 14, 1998

perceived as a basic building block of nation building. According to Eugen Weber (1996), prior to mass education, French rural citizens had no common language; the French state had no cohesion and the French nation had no common heritage. This has been the experience of other countries as well so that public education has gradually become an instrument of legitimacy for all nation states. An institution already inseparable from citizenship, basic education is now acquiring a universal character given the emergence of education as a basic human right.

A pure market model would be inappropriate given these externalities. Instead, primary education should probably be viewed more as a public good than as a private good. From this perspective, in order to be effectively managed, primary education needs hierarchy and also participation more than it does market characteristics. And it is with respect to participation—i.e. with respect to the voice which local communities and parents enjoy in the management of primary education systems—that current institutional designs leave much to be desired.

Albert O. Hirschman was the first prominent economist to observe that the availability of exit options for consumers of public education led to the exodus of the most influential, quality conscious and vocal families, thus depriving the school system of the recuperative function of participation (Hirschman, 1970). Agency theory also suggests that control of teaching quality through hierarchical means in large systems is prohibitively expensive due to information asymmetries. Hence, the economic justification of community involvement: it reduces the heavy transaction costs associated with central monitoring and control mechanisms.

Equally, the travails of educational administrations and the behavior of teachers' unions are best examined with the aid of "public choice" theory. In particular, problems of "free riding" need to be dealt with through decentralization, devolution, selective incentives and effective linkages between budgeting and evaluation. Ultimately, the logic of the new public management approach is to link budget allocations and teachers' salaries closely to students' achievement.

The success of education reform often hinges on political economy considerations. Within the logic of the current human capital approach, the time has come for economic analysis to "net out" the non educational factors which influence earnings (e.g. family background); to take account of the opportunity cost of children's time as well as educational achievement rates in the estimation of benefits; and most of all to gear economic analysis to dispassionate assessments of design alternatives rather than to the pressures of an archaic loan approval culture.

Rational for Government Intervention and Public Expenditure in the Social Sector

□ *Capital market imperfections.* The private purchase of schooling, especially of higher education, is beyond the means of many poor families. Most credit markets do not provide an effective solution because of strong imperfections that reduce participation, particularly

among very poor people. In principle, the budget constraints can be overcome by borrowing, given the high private returns to education. However, there are high risks for both borrowers and lenders in educational financing, and banks do not accept the promise of future earnings as collateral.

□ *Incomplete information.* Market failure also relates to the problems of uncertainty and incomplete information. Households may not know the existence of services in education, or they may not be aware of the private returns to education, which have a long gestation period. As a result, they tend to under-invest in education.

□ *Externalities.* Some of the benefits from education accrue not only to its direct recipients but also to society at large. Literacy, for example, lowers the transaction costs amongst individuals; women's education brings external benefits for fertility control and child health and nutrition. In deciding how much to purchase, individuals compare only the personal benefits and personal costs. Private provision, or full cost-recovery, would result in under-investment in education.

□ *Principle-agent.* The relevant decision-making unit is usually the household--more accurately, the parents within it--and not the child. For example, in education, the important issue is the perceived balance between the costs and benefits to the parents of sending their child to school. Since only some portion of the returns to schooling will accrue to parents, there may be rational (if regrettable) reasons for households to under-invest in schooling, notwithstanding its apparently high economic returns.

Equity and Merit Goods and merit goods:

□ *Equity.* Not all groups in society can afford the direct and indirect costs associated with investing in education. The government therefore plays a role in promoting equality of opportunity. If education was provided under market conditions, only those who could afford to pay would be able to enroll. Not only would there be under-investment from the social point of view, but income inequalities would be preserved from one generation to the next, since education is itself a determinant of lifetime income.

□ *Merit goods.* Education is often considered a type of good with special merit that is not readily quantifiable and that might be under-supplied if left to the market. Basic education, for example, is an important channel through which governments advance nation building in addition to imparting basic literacy, numeracy and problem-solving skills.

Review Questions

1. How are human capital and physical capital similar? How are they different?
2. What are the best ways to build a country's human capital?
3. For low-income countries, what are the main obstacles to universal primary education?

Further Readings:

1. Frederick H. Harbison., *Human Resources as Wealth of Nations*, Oxford University Press, New York, 1973.
2. Bhagwati, J. (1973) 'Education, Class Structure, and Income Inequality', *World Development*, 1: 21-36.
3. Edwards, E.O. and Todaro, M.P. (1974) 'Education, Society and Development', *World Development*, 2: 25-30.
4. Lewis, A. (1962), 'Education and Economic development', *International Social Science Journal*, 14:685-699.
5. Psacharopoulos G.(1985), 'Returns to Education: An Updated International Comparison', *Comparative Education Review*, 17:321-341.
6. Rosen, S. (1985) 'Human Capital', University of Chicago, mimeo.
7. Schultz, T.W. (1963), *The Economic Value of Education*, New York: Columbia University Press.
8. World Bank (1980) *Education Sector Policy Paper*, 3rd edition, Washington DC: World Bank.
9. Coleman, James S. 1987. "Families and Schools." *Educational Researcher*, August/September.
10. Hirschman, Albert O. 1970. Exit, Voice and Loyalty: Responses to Declines in Firms, Organizations and States. Cambridge: Harvard University Press.
11. Jarousse, J.P. and Alain Mingat. 1993. "Options for Accelerated Development of Primary Education in the Sahel, IREDU-CNRS" France: University of Bourgogne.
12. Mason, Andrew D., and Shahidur R. Khandker. 1996. "Measuring the Opportunity Costs of Children's Time in a Developing Country: Implications for Education Sector Analysis and Interventions." *Human Capital Development Working Paper (72)*, Human Capital Development, World Bank.
13. Picciotto, Robert. 1995. "Putting Institutional Economics to Work: From Participation to Governance." World Bank Discussion Paper 304. Washington: World Bank.
14. Psacharopoulos, George. 1995. "Using Evaluation Indicators To Track the Performance of Education Programs." in *Evaluation and*

Development, Proceedings of the 1994 World Bank Conference, Operations Evaluation Department, Washington: World Bank.

15. Rubinson, Richard and Irene Browne. 1994 "Education and the Economy" in Neil J. Smelser and Richard Swedberg, eds. Handbook of Economic Sociology, Princeton: Princeton University Press and Russell Sage Foundation.
16. Weber, Eugen . 1983. "La Fin des Terroirs, La Modernisation de la France Rurale (1870-1914)." Fayard, Editions Recherches.
17. Wolff, Laurence, Ernest Schiefelbein, Jorge Valenzuela. 1994. "Improving the Quality of Primary Education in Latin America and the Caribbean: Toward the 21st Century." World Bank Discussion Paper 257. Washington: World Bank.
18. World Bank. 1994. Evaluation Results, Operations Evaluation Department, Washington: World Bank.
19. World Bank 1995. "A Review of the Quality of Economic Analysis in Staff Appraisal Reports Approved in 1993." Operations Policy Department and Operations Evaluation Department, World Bank (mimeo).

Lesson 7: Poverty

Objectives:

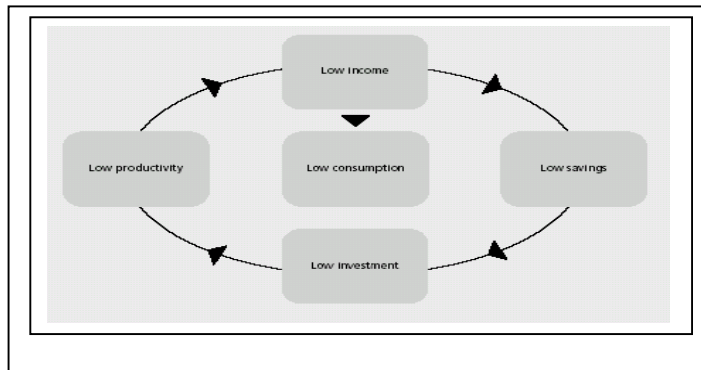
After studying this lesson, you will be able to:

- Explain vicious circle of poverty
- Discuss the trends in Consumption-Based Poverty
- Describe the inequality measures in Bangladesh and
- Explain the money approach to poverty.

The Vicious Circle of Poverty: The Mainstream View

Economists generally assume that people's willingness to save for future consumption grows with their incomes. The poorer people are, the less they can afford to plan for the future and save. The same logic applies to businesses and governments. Thus in poor countries, where most incomes have to be spent to meet current- often urgent-needs, national saving tends to be low. Low saving hinders desperately needed domestic investment in both physical capital and human capital. Without new investment, an economy's productivity cannot be increased and incomes cannot be raised. That closes the vicious circle of poverty. So are poor countries doomed to remain poor?

The vicious cycle of poverty



Source: Soubbotina, T. P. and K. A. Sheram, *Beyond Economic Growth*, Washington: World Bank, 2000

Trends in Consumption-Based Poverty and Inequality Measures in Bangladesh²¹

Consistent with the growth performance, survey-based consumption poverty estimates confirm that the nineties were a period of declining poverty. Analysis of various Household Expenditure Surveys (HES) conducted by the Bangladesh Bureau of Statistics during the nineties

²¹ Source: World Bank (2002), Bangladesh: Progress in Poverty Reduction, Bangladesh Development Forum, Paris, March 13-15, 2002

shows that the incidence of poverty, as measured by both the upper and lower cost-of-basic needs (CBN) poverty lines, has fallen considerably. In 2000, 50 percent of the country's population was poor (as measured by the upper poverty line), compared to 59 percent in 1991-92. Similarly, the extreme poverty rate (below the lower poverty line) declined from 43 percent in 1991-92 to 34 percent in 2000. Thus, according to both the upper as well as lower poverty estimates, the incidence of poverty in Bangladesh declined by about 9 percentage points over the course of the decade.

Trends in CBN Poverty Measures

	Upper Poverty Line			Lower Poverty Line		
	1991-92	1995-96	2000	1991-92	1995-96	2000
HEADCOUNT RATE (P₀):						
National	58.8	51.0	49.8	42.7	34.4	33.7
Urban	44.9	29.4	36.6	23.3	13.7	19.1
Rural	61.2	55.2	53.0	46.0	38.5	37.4
POVERTY GAP (P₁):						
National	17.2	13.3	12.9	10.7	7.6	7.3
Urban	12.0	7.2	9.5	4.9	2.6	3.8
Rural	18.1	14.5	13.8	11.7	8.6	8.2
SQUARED POVERTY GAP (P₂):						
National	6.8	4.8	4.6	3.9	2.5	2.3
Urban	4.4	2.5	3.4	1.5	0.7	1.2
Rural	7.2	5.3	4.9	4.3	2.8	2.6

The poverty gap (P1) estimates how far below the poverty line the poor are on average as a proportion of that line. The squared poverty gap (P2) takes into account not only the distance separating the poor from the poverty line, but also inequality among the poor. Trends in these measures broadly mirror those observed with the headcount rates.

Although the progress on poverty is heartening, the overall incidence of poverty (50 percent) remains very high. Examining the total number of individuals living below the poverty line presents a sobering picture: the total population living below the upper poverty line in 2000 remained virtually unchanged (at about 63 million) compared to 1991-92, while the population living below the lower poverty line declined somewhat from 45.2 million in 1991-92 to 42.5 million in 2000. Progress on reducing poverty incidence was equal across urban and rural areas, but rural areas had better progress in reducing the depth and severity of poverty. Although average per capita expenditures increased much faster in urban areas,³ the overall decline in poverty incidence during the decade was roughly equal across the two sectors.⁴ However, trends in the P1 and P2 measures suggest that rural areas experienced greater reductions than urban areas in the depth and severity of poverty.

A sectoral decomposition of the change in national poverty incidence into intra-sectoral changes and inter-sectoral changes due to migration suggests that the rural sector, with 80 percent of the population, contributed 78 percent of the total decrease in national poverty estimates between 1991-92 and 2000. The urban sector contributed about 10 percent of the national poverty decline

Income inequality in Bangladesh rose considerably over the decade, particularly in urban areas. The HES data suggest that inequality in the distribution of private per capita expenditures, as measured by the Gini coefficient, increased from 0.259 in 1991-92 to 0.306 in 2000

. Most of the observed increase in inequality took place during the first half of the nineties.

In part, the rise in inequality over the decade reflects increased fragmentation and inequality of landholdings, as well as higher premiums enjoyed by the segment of the population fortunate enough to have relatively better skills and education. Urban inequality increased much more than rural inequality during this period. Decomposing the national Gini coefficient by sector suggests that the increase in the national Gini was due not only to rising inequality within sectors, but also to rising inequality between the urban and rural sectors. In sum, measures of consumption-based poverty estimates illustrate substantial progress in poverty in both urban and rural areas, but the underlying process of growth appears to have been very different. Urban areas had much higher growth in average incomes, but also considerable increase in inequality. The urban poor are mainly employed in the service sector, which as discussed earlier, had negligible increase in productivity during the nineties. Growth, in urban areas, was largely concentrated amongst the rich. What made a similar rate of poverty reduction possible in rural areas, despite slower growth, was a growth process that was relatively more broad-based and pro-poor.

Trends in Inequality: Gini Coefficients

	Upper Poverty Line			Lower Poverty Line		
	1991-92	1995-96	2000	1991-92	1995-96	2000
National	0.259	0.302	0.306	0.272	0.315	0.318
Urban	0.307	0.363	0.368	0.311	0.369	0.370
Rural	0.243	0.265	0.271	0.251	0.267	0.275

Source: BBS and World Bank staff estimates.

The Cost of Basic Needs Method

With the cost of basic needs (CBN) method, poverty lines represent the level of per capita expenditures at which the members of a household can be expected to meet their basic needs (food consumption to meet their caloric requirement, but also non-food consumption). Making comparisons of poverty rates over time requires that the basic-needs bundles used to estimate poverty lines in different years are of constant value in real terms. In order to ensure this, CBN poverty lines were first estimated for a base year, chosen to be 1991-92, and then updated to 1995-96 and 2000 for changes in the cost-of-living using a price index.

As prices of some goods and services may vary between geographical areas in Bangladesh, poverty lines were estimated at a disaggregated level. Specifically, the country was divided into 14 different geographic areas (9 urban and 5 rural).

The method followed for estimating the 1991-92 regional CBN poverty lines and the price indices are described below.

Estimating the Base Year CBN Poverty Lines

Three steps were followed for estimating what it cost a household to meet its basic needs in the base year. First, the cost of a fixed food bundle was estimated. The bundle consists of eleven items: rice, wheat, pulses, milk, oil, meat, fresh water fish, potato, other vegetables, sugar, and fruits.

It provides minimal nutritional requirements corresponding to 2,122 kcal per day and person, the same threshold used to identify the absolute poor with the direct caloric intake method. Prices for each item in the bundle were estimated for each of the fourteen geographic areas. In order to capture the price paid by the poor for each food item, regressions were used to control for the impact of household characteristics such as total consumption, education, and occupation on the quality of the food consumed (better off households buy more expensive food than the poor). Denoting the required quantities in the food bundle to meet the caloric requirement by (F_1, \dots, F_N) , where F_j is the required per capita quantity of food item j , food poverty lines were computed as $Z_k^f = \sum P_{jk} F_j$. In this equation, the nutritional needs are the same for all areas, but the prices for each item are area-specific, with the subscript k referring to area k .

The second step entailed computing two non-food allowances for non-food consumption.

The first was obtained by taking the average amount spent on non-food items by those households whose total consumption was equal to their food poverty line Z_k^f . These households spend less on food than the food poverty line. Hence what they spend on non-food items must be devoted to bare essentials. Algebraically, denoting total per capita consumption of household i by y_i and food per capita consumption by x_i , the "lower" allowances for non-food consumption were estimated as ZL_k^n

$= E[y_i - x_i \mid y_i = Z_k^f]$, where E is the expectation statistical symbol. Second, "upper" allowances for non-food consumption were estimated by taking the amount spent on non-food items by those households whose food expenditure was equal to the food poverty line (these households do meet their food requirement). These upper allowances for non-food items can be expressed as $ZU_k^n = E[y_i - x_i \mid x_i = Z_k^f]$. Because the share of food expenditures in total consumption decreases as consumption increases, ZU_k^n is larger than ZL_k^n .

The third step in the estimation of the poverty lines consisted simply in adding to the food poverty lines the lower and upper non-food

allowances to yield the total lower and upper poverty lines for each of the 14 geographical areas:

Lower poverty line: $ZL_k = Z_{kf} + ZL_{kn}$, where $ZL_{kn} = E[y_i - x_i \mid y_i = Z_{kf}]$

Upper poverty line: $ZU_k = Z_{kf} + ZU_{kn}$, where $ZU_{kn} = E[y_i - x_i \mid x_i = Z_{kf}]$

Thus, within each area, the estimates of the cost of basic food needs are the same with the lower and upper poverty lines. The difference between the two lines is due to the difference in estimation of the allowances for non-food consumption. The lower poverty line incorporates a minimal allowance for non-food goods (the typical non-food spending of those who could just afford the food requirement) while the upper poverty line makes a more generous allowance (the typical non-food spending of those who just attained the food requirement).

Updating Poverty Lines for Changes in Cost -of-Living

Price indices for updating the 1991-92 CBN poverty lines to 1995-96 and 2000 were derived by combining price information available in the HES datasets and the non-food CPI. The HES data provide price information on food items and fuels that account for approximately two-thirds of total household expenditure. Inflation of non-foods that cannot be calculated from the HES surveys was estimated by the non-food component of the CPI.

The HES-based price indices were derived in four steps. First, expenditures on various items in the HES were divided into 14 groups. These groups were chosen so as to retain as much disaggregation as possible (to minimize heterogeneity within categories) as well as to be comparable across the three survey years. Second, unit values (by dividing expenditures by quantity) of the most commonly consumed item within each of the expenditure groups were calculated for each household. For each group, the median of the unit values within each geographic region was calculated. Using the price of the most commonly consumed item within each group and medians (which are more robust to outliers as compared to means) for the summary region-specific unit values helped minimize the problem that the calculated unit values are contaminated by choice of quality rather than providing information on market price alone. Third, average budget shares of the 14 main expenditure groups were calculated for each survey year. Finally, region-specific Törnqvist price indexes were then calculated using budget shares of the expenditure groups along with median prices of the selected items. The Törnqvist price indices for each region k were calculated as follows:

$$\ln P_{10}^k = \sum_{j=1}^n \frac{w_{1j}^k + w_{0j}^k}{2} \ln \left(\frac{P_{1j}^k}{P_{0j}^k} \right)$$

where P_{10}^k denotes the Törnqvist price index for region k , 1 and 0 denote the two years of comparison, w_{1j}^k and w_{0j}^k are the respective budget

shares, and pk_{1j} and pk_{0j} are the respective prices for good j in the two years of comparison.

Once the HES-based price indexes for each region had been derived from the survey data, a weighted average of these and the non-food CPI (disaggregated by urban and rural sectors) was taken to derive region-specific cost-of-living indices for 1995-96 and 2000-01, the relative weights being the budget shares of covered goods in each region for the HES price index, and balance (i.e. one minus these budget shares) for the non-food CPI. The composite price indices were then used to update the 1991-92 CBN poverty lines to 1995-96 and 2000-01.

The "monetary approach" to poverty²²

"Monetary approach" to poverty measurement brings to mind the identification of poverty with a shortfall in a monetary indicator, as generally adopted by economists in measuring poverty.

Identification

The problem of identification "involves the choice of a criterion of poverty (e.g. the selection of a "poverty line" in terms of real income per head), and then ascertaining those who satisfy that

criterion (e.g. fall below the "poverty line") and those who do not." (Sen 1976). The choice of such criterion can however be divided into several steps: the choice of an indicator, the choice of a unit of analysis, and the choice of a poverty line.

The choice of an indicator. The issue of what is lacking which identifies someone as poor is very broad and can be discussed at very different levels. In the common practice of the monetary approach, however, practitioners do not dwell too much on the philosophical positions underlying alternative possibilities. Such possibilities are generally restricted to expenditure or income data, given the problems posed by the observability and valuation of assets in order to arrive at a measure of wealth. Arguments could be found in favour of either, as one can be considered as effective and the other potential spending. It is often claimed that theoretically expenditure is preferable to income, either because it can be seen as a proxy for consumption and hence of individual utility, or as a proxy

for permanent income (which however requires strong assumptions on the existence and functioning). And some of these problems are rather fundamental, for example, it is not uncommon for survey to be run in urban areas only.

It has been found, for example, that focusing the food modules of the questionnaires on meals eaten and failing to record the amount of snacking can significantly underestimate the amount of food

²² Laderchi, Caterina Ruggeri (2000), The monetary approach to poverty: a survey of concepts and methods, QEH Working Paper Number 58, University of Oxford

consumption, at least by certain household members. It is customary to interview one member per household, often the head or the person deemed to be better informed on the issue on which a certain module is centred, but this practice overlooks the possibility of different members of the household having autonomous streams of income which they control. An example of the pragmatism which characterises the construction of indicators is the inclusion of socially disapproved goods such as alcohol in the welfare indicator. While defensible on the grounds that such expenditure reflects household choices, doubts could be raised on whether such expenditure really contributes to household welfare. (of credit markets) and hence long term living standards. And the argument can be reinforced by considering the difficulty in obtaining reliable income data especially in developing countries.

The choice of a unit of analysis. As discussed above, since the beginning poverty measurement was performed seeing poverty as a problem of an individual, though much of the causes of poverty seemed to operate at the household level. A similar ambiguity permeates microeconomic analysis given that traditionally it concerns itself with individual behaviour, though it is hard not to acknowledge that individuals live in households. The simplest way of dealing with this is to take the household as a unit of observation, and then take into account its size (and possibly its composition) to determine whether the household is poor.

It is unavoidable, however, that even the recent analysis which has tried to unpack what happens in the household rather than considering it as a blackbox cannot solve the problem that whether black or transparent, the household is a box. By living together in that box individuals have interdependent standards of living. One could see this as a problem of observability only, so that it is only feasibility or cost which prevent us from observing the resources to which the individual has access, though we might suspect that there are systematic sources of discrimination (e.g. gender bias). It should be noted however that, adopting alternative definitions of “resources” (or rather, as will be discussed in the next section, alternative definitions of the dimension in which poverty manifests itself) the problem becomes more complex.

The choice of a poverty line. The derivation of a poverty line is central to the monetary approach to poverty measurement, and it is symptomatic that one of the longstanding debates on the nature of poverty – i.e. its absolute or relative nature – is reflected most clearly in the choice of the poverty line and in the methodologies adopted to update it over time (a problem whose importance is often overlooked). Attempts have been made to tackle the issue of the choice of the poverty line in a framework explicitly based in welfare economics (Ravallion 1998), in which the poverty line is defined as “the minimum cost of the poverty level of utility.” (ibid. p. 3). Adopting this approach then implies facing a problem of standardising by household characteristics (and prices) analogous to the one of the identification of equivalence scales. Furthermore, the problem of the choice of the level of utility taken as a

reference remains arbitrary. Standard practices²¹ take different starting points, identifying the poverty line either with respect to

Aggregation

Having identified the position of every observation taken as unit of analysis with respect to a poverty line drawn in the space of the indicator of interest, the second phase of poverty measurement involves the aggregation of these individual informations into one index. The seminal paper in this context is Sen (1976) where the principles of an axiomatic approach to the measurement of poverty are spelled out along the path followed in the literature on inequality and applied to a new index (Sen's index). Until then, people had relied on statistical indices like the headcount (the percentage of people living in poverty) and the income gap ratio (the shortfall between poor people's average income and the poverty line, divided by the poverty line). Key axioms (Patrizi 1990) with respect to which these widely used poverty indices are judged are: 1) the axiom of the irrelevance of the nonpoor, by which the distribution lying above the poverty line should not be considered in a poverty index; 2) the monotonicity axiom, stating that "given other things, a reduction in income of a person below the poverty line must increase the poverty measure" (Sen 1976, p 219); 3) the transfer axiom stating that "given other things, a pure transfer of income from a person below the poverty line to anyone who is richer must increase the poverty measure".

The application of the axiomatic approach to the construction of poverty indices has helped focusing attention on the desirable characteristics of a poverty index when constructing poverty indices.²⁴ By far the most popular of such efforts is the formula of the FGT family of indices (Foster Greer Thorbeck 1984), which encompass the headcount ratio and the poverty gap as well an index for the severity of poverty which respects all of the three axioms mentioned above.

While the presentation of the FGT indices has become quite standard practice in the construction of poverty profiles, it is worth mentioning that the impossibility of reconciling all plausibly desirable axioms has led to another strand of poverty measurement based explicitly in a social valuation function, measuring the social loss due to poverty in which different aspects of poverty can be explicitly traded off one against the other. This last approach is obviously explicitly normative, and presents a contrast with views of poverty measurement as purely descriptive. However, even an axiomatic approach provides a set of weak constraints on the functional form of the index, therefore leaving space for normative judgements to identify it (e.g. to chose the weighting system for different degrees of poverty). And in general, even if the identification of axiomatic indices with descriptive ones were correct, it might prove difficult to classify different kind of indices into descriptive or normative. For example it can be shown (Patrizi 1990) that, though the FGT family can be characterised axiomatically, it provides orderings equivalent to those obtained with stochastic dominance²⁶ which in their turn have normative implications.

Comparability of results.

Given the variety of issues to be faced in order to arrive at an estimate of the extent of poverty, the comparability of results over time and location becomes an important issue. While it is easy to calculate the same indices in different contexts, it is not a given that they reflect the same kind of information, even when calculated over equally defined variables – which entails the inclusion of the same components and the absence of verbal confusion on what is meant in similar questions posed in different surveys.

The monetary approach does not offer a widely accepted “self-contained” (i.e. not anchored to some normative theory) definition of poverty, with the exception of those measures linked to efficiency wage mechanisms and which are not hugely adopted. Similarly, the big questions on the mechanisms which brought about poverty and determined its intensity – questions to which the classics devoted a good amount of thought – are not on the agenda as they cannot be perceived from an exclusively microeconomic and individualistic perspective.

Some have seen this as an unsatisfactory situation. Lewis and Ulph (1998) identify three interrelated issues, disregarding of which prevents the development of a microeconomics of poverty: how a concern for poverty (as captured by normative indices) differs from a concern for relatively low incomes as discussed in the literature on the measurement of inequality; how poverty and inequality “interrelate and contribute to the overall level of societal welfare” and what is the significance of a poverty line which is externally given.² Lewis and Ulph do not attach great importance to this last issue, as they are mostly interested in measurement, and as “the problem of determining the poverty line is logically distinct from that of measuring the poverty line”. From a conceptual point of view however, an externally given poverty line (in the sense of not depending on any of the parameters driving individual behaviour) does not explain the economic significance of the discontinuity between the poor and the non poor (and if one assumes that there is no discontinuity in some behavioural sense, then it is not clear what the significance of the externally given poverty line is).

They propose a model incorporating “two critical features that should be present in any coherent account of poverty at the individual level” (p. 120 *ibid.*), i.e. that there is a strictly positive minimum of expenditure required on one or more specific commodities to escape poverty, and that this minimum consumption also provides indirect consumption benefits in the form of participation in certain activities or social participation. This model, allows the authors to show why poverty matters for the utility of the individual and how it matters for society in as much as societal welfare is a reflection of individual preferences. While the Lewis and Ulph model presented above does not seem to have shifted the way poverty is modelled greatly (or rather, “not modelled” in itself), it provides an interesting example of the way the concept of poverty can be integrated into microeconomic analysis. Such a way of proceeding is indeed quite reductionist as it is focused on individual utility and in a

view of society as composed by “the sum of individuals acting rationally” (Burgemeier 1994). In the next section we will briefly summarise how these basic foundations of welfarism have been criticised, but the popularity of Sen’s critique seem to make it superfluous to dwell on it in much detail.

Of philosophers and values

Two alternative philosophical systems have been identified as justifying the use of monetary indicators to measure poverty. The first one is the welfarist one, and applies when poverty is conceptualised as lack of economic welfare and measured in terms of achieved standard of living.

This view is explicitly linked to the assumptions of microeconomics, crucial among them that individuals have identical preferences. In this framework it is the concept of utility as inferred from market behaviour that becomes the indicator which is supposed to capture economic welfare. The second view, less widespread, adopts a rights based approach, and assumes that households or individuals are entitled to a minimum income, the disposal of which is a matter for them. (Atkinson 1989).

In various contributions (usefully synthesised in Sen 1997) Sen offered a thorough review of the welfarist approach, by criticising in a sequence the different “steps” which link market behaviour to individual welfare. He emphasised the distinction between well-being and welfare where the former pertains only to purely self-seeking behaviour,³² and the latter also includes the consideration of agency (which includes other goals, values and ideals that are important in individual life despite not increasing an individual’s well-being). While well-being can be arguably proxied by utility, agency goals cannot, so that utility stands as a very imperfect approximation of welfare. As for inferring utility from market behaviour, market choices might be determined by other factors than pure utility maximisation (e.g. strategic interactions). He then questioned the significance of utility maximisation, as it would be foolish (rather than rational) to define one’s own wellbeing on the basis of the same criteria adopted to determine market choices. Further, even if the utility outcome was the only thing that mattered for the individual, subjective and objective elements would contribute to it, therefore making utility a rather noisy indicator.

To prove this Sen criticised different definitions of utility in turn. If utility stands for desire fulfilment or happiness, then adopting a utility based framework entails neglecting factors which might not be desirable in an objective valuation of well-being. For example, neglecting what people can effectively do by focusing only on their mental disposition (“physical-condition neglect”) as well as neglecting the way that valuation is influenced by what appears reasonable or possible (the “valuation-neglect”).

If utility is taken instead as a description of choices without reference to the underlying psychological conditions, i.e. the Revealed Preference

definition of utility, it provides an even weaker basis for ethical judgement. It can be noted, however, that Sen's critique does not extend to approaches based on rights. They offer a non-welfarist alternative ethical justification to monetary based poverty measurement which has the advantage of avoiding the issue of interpersonal comparisons. For example Von Parijs (1995) suggests an approach based on "real freedom" 34 – not only the formal freedom of "doing what one might want to do" but also having the minimal amount of means, for doing it. It is interesting to note that, unlike in Sen's right based capability approach, the actual space in which satisfaction of minimum rights is to be verified is the space of resources.

Conclusions

From a mission for few enlightened minds, poverty measurement has now become a sophisticated and professional endeavour. Its developments have closely followed those of many disciplines, from sociology to economics and statistics and a set of standard procedures has now been identified. Still, in this survey we have reminded ourselves that there are many unpleasantly vague details and questions which have not yet been sorted out, and whose solution requires taking a number of decisions of rather normative nature. Be it in the definition of the poverty line, or in the decision of the space in which it has to be drawn and for which unit of analysis, vagueness surrounds any given estimate of poverty. The ideal objective assessment in which early studies believed seems therefore to have been proved unachievable. Another aim of the early pioneers however seems to have been extremely successful. The estimates of poverty have entered into the political debate and become policy targets, their reduction has even been enshrined into constitutional law (as in the case of Ireland). While this is indeed a reason for optimism, knowing what these numbers tell and what they hide has become even more of an important issue as a result.

Review Questions:

1. Explain vicious circle of poverty.
2. Discuss the trends in Consumption-Based Poverty.
3. Describe the inequality measures in Bangladesh.
4. Explain the money approach to poverty.

Further Reading

1. Atkinson, Anthony B. (1989) *Poverty and social security* London, Harvester Wheatsheaf
2. Atkinson, Anthony B. (1995) *Incomes and the welfare state*, Cambridge University Press
3. Bales, Kevin (1999) "Popular reactions to Sociological Research: the Case of Charles Booth"
4. *Sociology* vol 33, n.1
5. Banks, James and Paul Johnson (1993) *Children and household living standards* London Institute
6. for Fiscal Studies
7. Booth, Charles (1887) "The inhabitants of Tower Hamlets (School Board Division), their condition
8. and occupations" *Journal of Royal Statistical Society*, vol. 50, pp 326-340.
9. Bowley, Arthur Lyon and Margaret Hogg, (1925) *Has poverty diminished? : A sequel to*
10. *"Livelihood and poverty"*, P.S. King London
11. Bulmer, Martin (1985) "The development of sociology and of empirical social research in Britain"
12. in Bulmer (ed) (1985)
13. Bulmer, Martin (ed.) (1985) *Essays on the history of British Sociological Research*, Cambridge,
14. Cambridge University Press
15. Deaton, Angus and Salman Zaidi (1999) *Guidelines for Constructing Consumption Aggregates*
16. *for Welfare Analysis*. World Bank, mimeo
17. Foster, James (1994) "Normative measurement: is theory relevant?" *American Economic Review*
18. *Papers and Proceedings*
19. Foster, James, Joel Greer, Erik Thorbecke (1984) "A Class of Decomposable Poverty Measures",
20. *Econometrica* vol 52, n. 3 pp 761-66.
21. Gillie, Alan (1996) "The origin of the poverty line" *Economic History Review*, vol. 49, n.4, pp 715-
22. 730

23. Grosh, Margaret and Paul Glewwe (2000) *Designing Household Survey Questionnaires for*
24. *Developing Countries: Lessons from 15 Years of the Living Standards Measurement Study.*
25. Volumes 1, 2, and 3. The World Bank.
26. Hennock E.P. (1987) "The measurement of urban poverty: from the metropolis to the nation, 1880-
27. 1920", *Economic History Review*, vol. 40, pp 208-227
28. Kent, Raymond (1985) "The emergence of the Sociological Survey, 1887-1939" in Bulmer (ed)
29. (1985)
30. Lavy, Victor, Jennifer Spratt, and Nathalie Leboucher. (1995) "Changing Patterns of Illiteracy
31. in Morocco: Assessment Methods Compared." *Living Standards Measurement Study, Working*
32. Paper No. 115, World Bank, Washington, D.C.
33. Lewis, G.W. and D.T. Ulph (1998) "Poverty, inequality and welfare", *The Economic Journal*, vol.
34. 98 (*Conference 1988*), pp. 117-131
35. Lipton, Michael (1983) *Poverty, Undernutrition and Hunger*. World Bank Staff Working Papers n.
36. 597, Washington D.C. The World Bank
37. Lipton, Michael (1988) *The Poor and the Poorest. Some interim findings*. World Bank Discussion
38. Papers n. 25, Washington D.C. The World Bank
39. Marshall, Thomas (1981) *The right to welfare: and other essays*, London: Heinemann Educational
40. Nolan, Brian and Christopher T. Whelan (1996) *Resources Deprivation and Poverty*, Oxford
41. Clarendon Press
42. Patrizi, Vincenzo (1990) "Sul significato normativo delle misure di povertà", *Politica Economica*
43. vol 6 n. 1, pp 31-76.
44. Pollak, Robert A. and Terence J. Wales (1979) "Welfare Comparisons and Equivalence Scales"
45. *American Economic Review* vol 69 n. 2, pp 216-21
46. Ravallion, Martin (1998) *Poverty lines in theory and practice*, LSMS Working Paper n. 133,
47. Washington The World Bank
48. *QEH Working Paper Series – QEHWPS58 Page 19*
49. Ravallion, Martin and Benu Bidani (1994) "How Robust Is a Poverty Profile?" *World Bank*
50. *Economic Review*, vol 8 n.1, pp 75-102.

51. Rowntree, B. Seebohm, (1902) *Poverty. A study of town life*. Mc Millan and Co. London. 2nd
52. edition
53. Seckler, David (1982) “ ‘ Small but healthy’: a basic hypothesis in the theory, measurement and
54. policy of malnutrition” in Sukhatme, P.V., (1982, ed) *Newer concepts in nutrition and their*
55. *implications for policy*, Pune, India: Maharashtra Association for the Cultivation of Science
56. Research Institute.
57. Selvin, Hannan C with the assistance of Christopher Bernert (1985) “Durkheim, Booth and Yule:
58. the non diffusion of an intellectual innovation” in Bulmer (ed) (1985)
59. Sen, Amartya (1976) “Poverty: an ordinal approach to measurement”, *Econometrica*, vol. 44 n.2,
60. pp 219-231
61. Sen, Amartya (1997) *On economic inequality. Expanded edition with a substantial annexe by*
62. *James E. Foster and Amartya Sen*, Oxford Clarendon Press
63. Simey, Thomas S and Margaret B. Simey (1960) *Charles Booth, social scientist*, London Oxford
64. University Press
65. Stigler, George J. (1954) “The early history of empirical studies of consumer behaviour” *The*
66. *Journal of Political Economy*, vol. 62 n.2, pp 95-113
67. Thon, Dominique (1983) “A note on troublesome axioms for poverty indices” *The Economic*
68. *Journal* Vol 93, issue 369
69. Van Parjis, Philippe (1995) *Real freedom for all*, Oxford Clarendon Press
70. Veit-Wilson, John (1986) “Paradigms of poverty: a rehabilitation of B.S. Rowntree”, *Journal of*
71. *Social Policy*, 15 n.1
72. Yule, G. Udny (1895) “On the correlation of total pauperism with proportion of outrelief”
73. *Economic Journal*, vol 5 n. 2, pp 477-489