Factor Proportions and Urban Employment in Developing Countries

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Introduction

OVER THE PAST DECADE it has become increasingly obvious that unequal income distribution and the lack of suitable employment opportunities are among the most serious social and economic problems in developing countries. The two problems are by no means identical in their effect on individual welfare: apart from the hardship of low incomes, when suitable jobs are hard to find people must devote a considerable effort to the search for employment (particularly casual labourers), frequent spells without work lower income still further, and uncertainty about future income exacts a heavy psychic toll, to say nothing of the inevitable feeling among the unemployed that society has no use for their talents.

Creating employment and preventing unemployment have often been regarded as one and the same problem. There is increasing evidence that this view is not only erroneous but may be positively misleading as well. Some interpretations of the development process suggest that the generation of urban employment does not even necessarily lower the urban unemployment rate, since rural-urban migration is so elastic that for every good urban job created more than one person will migrate and total unemployment in the towns will increase.[2] Besides, the unemployment rate is a poor indicator of the difficulty of finding employment since it is affected not only by objective but by subjective factors, one of which is the urgency of the individual's desire or need for a job; if his economic situation is precarious enough he may work uninterruptedly in spite of the difficulties involved. A high unemployment rate may in some instances be the result rather of a gap between aspirations and job

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[2] See Michael Todaro: " A model of labor migration and urban unemployment in less developed countries ", in *American Economic Review* (Menasha (Wisconsin)), Mar. 1969.

opportunities than of the objective difficulty of getting any sort of job; a cross-country comparison of unemployment rates might then give a distorted picture of the objective difficulties of obtaining employment.

For these reasons, the various policies discussed in the present article will be examined for their effects on employment generation and unemployment prevention considered as two separate and distinct objectives.

Five broad categories of policies will be considered. While many of the specific proposals that have been put forward from time to time contain elements of several of these categories, the main emphasis often tends to be on only one or two of them at most, and they will serve our purposes without serious distortion. The five categories considered are—

(1) Restraining rural-urban migration either directly or by decreasing the incentive to migrate by improving rural living conditions.[1]

(2) Promoting faster growth as a means of creating more jobs in a given period of time.

(3) Influencing job aspirations in order to keep them in balance with the composition of labour demand, e.g. by controlling the growth of education at levels that produce unrealisable aspirations or by extolling the social merits of unpopular jobs.

(4) Slowing the rate of population growth.

(5) Increasing the demand for labour by changing factor proportions in given industries, or changing the composition of industries in favour of more labour-intensive ones.

We shall first examine each of these five recommendations in some detail in the light of accumulating evidence on the growth process in developing countries, and then devote further attention to the specific policy alternatives arising from the fifth of them, which appears to hold out the best promise of meeting the low-income employment problem within a reasonable period of time.

The five categories of recommendations

Restraining rural-urban migration

The observable fact that in developing countries open unemployment tends to be low in rural, primarily agricultural areas and high in urban areas leads naturally to the hypothesis that total unemployment is related

[1] One study in which this approach constitutes a major component is ILO: *Towards full employment. A programme for Colombia*, prepared by an inter-agency team organised by the International Labour Office (Geneva, 1970). The literature is rife with the policy recommendation that migration be slowed down, and the associated interpretation of the source of the unemployment problem. For a typical statement, see Raymond Crist: " Subsistence agriculture in Latin America ", in *Annual Report of the Smithsonian Institution, 1963* (Washington, US Government Printing Office, 1964).

to the rapid rural-urban migration and could be alleviated by slowing it, either by controls or by greater emphasis on improving rural living conditions.

The evidence on the link between migration and high open urban unemployment is not yet adequate to provide any general conclusions, and there is reason to expect the relationship to differ among countries. In some Latin American countries (at least) a surprisingly high share of unemployment appears to be semi-voluntary in nature, involving unsatisfied aspirations rather than an absolute unavailability of jobs; this unemployment appears more characteristic of city-born people than of immigrants—especially relatively unskilled immigrants, who seem to find work of one sort or another fairly quickly after arriving in the city. Where open unemployment tends to have an important element of the voluntary and is not characteristic of low-income immigrants, the argument for restraining the migration rate is clearly weakened.

Even if *some* unemployment were the result of immigration, it could be argued that there are more than offsetting gains. In most countries, certainly the Latin American ones, migration to the towns brings with it better health opportunities, better educational opportunities, and often (surprisingly to some) better employment opportunities. Most studies have found that the monetary incomes of migrants tend to be higher after the move [1], although it is not clear that real purchasing power is higher unless one includes differences in the implicit prices of education, health, and so on. When these are taken into account, the advantages of urban life are frequently striking.[2] It is by no means clear that employment difficulties are, in general, less in rural than in urban areas; the open unemployment rate is lower, but this might be attributed to greater problems attendant on being unemployed in rural areas rather than to greater difficulties in finding employment in the towns. Numerous studies of the motivation behind migration have found better employment opportunities in urban areas to be a major factor. While a few studies suggest that expectations in this respect are not met, this is not a systematic finding, and there is certainly no evidence that migrants, once they are in the city, believe employment difficulties to be greater there than they were in the country. It might be argued, further, that disguised unemployment, in the form of work of low productivity on one's own small plot when nothing else is available, entails not only as serious a waste of human resources as does open unemployment in the towns but also a comparable real income instability and something of the same sort of frustration.

[1] A number of such studies are cited in Joan M. Nelson: *Migrants, urban poverty, and instability in developing nations*, Harvard Center for International Affairs, Occasional Papers in International Affairs, No. 22, Sep. 1969, Ch. 1.

[2] In some economies the advantages of slower population growth—and there seems some evidence that this results from urbanisation—are also part of this package.

In some cases where rural-urban migration does contribute to urban unemployment, it is not clear whether there is a net loss of output since the open urban unemployment may, as just mentioned, have a rural parallel in disguised unemployment; and there may also be substantial disguised unemployment in urban areas, so that the over-all calculus of the effect of migration on output is a complex one.

All these issues remain to be settled empirically, and the results are likely to vary by country, by type of economy, and so on. While it is certainly true that many of the developing countries have systematically neglected the agricultural and rural sectors, and that the rectification of this bias might under some circumstances reduce the migratory flow, the case for any general attempt to resolve the unemployment problem in this fashion seems flimsy. None of this is to say that, with appropriate employment policies, migration would not slow down. If the " factor proportions " policy discussed below turned out to imply a more rapid increase in labour demand in rural than in urban areas, such would be the case. But this result could not be predicted with present knowledge, and in no case could the migration reduction be thought of as the source of a better employment situation; it would be an associated effect.

The optimal policy might well involve promotion of certain types of migration and discouragement of others, according to the skill level of the individual, whether the migration is from a rural area to a small town, or from a small town to a city, etc. In short, it is possible that the optimal migration policy would be complex; but if, when the mechanisms are better understood, it finally turns out to be simple, it will almost certainly be close to the no-control end of the spectrum of possibilities.

Promoting faster growth

Faster growth would be a necessary condition for alleviating employment problems in an economy in which factor proportions were fixed[1]; in such a case faster growth would be linked to faster capital formation, and the rate of capital formation would be the only instrument for employment creation. But in the real world the plausibility of this view is far from certain. Worse, it seems frequently (though inconsistently) to be put forward by persons whose idea of faster growth also involves labour-saving technological change. In the long run growth *is* associated with labour-saving technological change, which suggests that it could as well cause employment and income distribution problems as resolve them.[2]

[1] One of the early explanations of disguised unemployment in developing countries was in terms of the fixity of factor proportions (Richard Eckaus: " The factor proportions problem in underdeveloped areas ", in *American Economic Review*, op. cit., Sep. 1955).

[2] Dangers articulated, for example, in Frances Stewart and Paul Streeten: " Conflicts between output and employment objectives in developing countries ", in *Oxford Economic Papers* (London), July 1971.

Many of the levers which would be manipulated by the proponents of " growth first " [1] (e.g. increased foreign investment, subsidies to domestic savings and investment) would lead to the choice of higher capital/labour ratios by production units. If there were no such link between the rate of growth and the technological choices of firms, there seems little reason to doubt that faster growth would alleviate employment problems. But such a *ceteris paribus* statement is not likely to add much to the discussion.

That rapid growth has not consistently led to low unemployment rates is fairly clear from both single-country and cross-country empirical studies. Puerto Rico, where continued rapid growth has been accompanied by continued high open unemployment, is a case in point; considerable discussion of whether the ties with United States trade unions or the extensive United States investments have been special factors contributing to high unemployment in Puerto Rico has not yet produced a consensus. Brazil and Mexico seem to have been cases of fast growth and relatively low unemployment, but no analysis has yet been attempted to test for a causal link between the two phenomena. About all that can be said at present is that rapid growth is not a sufficient condition for low unemployment, nor does it necessarily result in high unemployment. Possibly there are important indirect effects of growth, but it is unclear whether these are sufficient to imply that the net effect of fast growth is to reduce unemployment.

The reasons for doubting the merits of the " faster growth " policy are thus partly empirical: fast growth, especially in the industrial sector, has notably failed in most developing countries to result in rapid employment generation, and high unemployment rates are observed in some fast-growing countries. And they are partly theoretical: faster growth, as conceived by many people, involves the diffusion of more modern methods—methods normally designed in and for the developed countries, and hence tending to be more capital-intensive than the traditional technologies.[2] If accelerated growth is due to more rapid capital formation which permits, and is associated with, more rapid technological change of a labour-saving type, there is little reason to expect that fast growth will be employment generating; the " fixed proportions " assumption often underlying the optimism with which this fast-growth strategy is

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[1] The approach which says, in effect, " get growth first and worry about distribution, unemployment and so on later ".

[2] The " big push " version of the balanced growth theory tended to focus on technological dualism as a distinguishing feature of developing economies, and on the transfer of resources from a traditional to a modern sector as an important aspect of the growth process. See Paul Rosenstein-Rodan: " Problems of industrialization of Eastern and South Eastern Europe ", in *Economic Journal* (London), June-Sep. 1953, and " Notes on the theory of the big push ", in Howard Ellis and Henry Wallich: *Economic development for Latin America* (New York, St. Martin's Press, 1961). Richard Nelson is a more recent exponent of these concepts; see " A 'diffusion' model of international productivity differences in manufacturing industry ", in *American Economic Review*, op. cit., Dec. 1968.

viewed is clearly inconsistent with fast growth so generated. It may be argued that, though rapid growth in such key sectors as industry and agriculture is associated with labour-saving technological change and with little employment generation in those sectors, it could at a later stage stimulate increases in the demand for and output of labour-intensive goods and services, i.e. it could generate an indirect effect in terms of both employment opportunities and income. If this effect were strong enough, then accelerated growth could indeed relieve the employment problem; as noted earlier, however, the empirical evidence is too unclear to permit any general conclusions along these lines.

The above discussion has been directed to the issue of employment generation; still less can be said about the effects of rapid growth on unemployment, which would depend to a considerable extent on the precise nature of the growth process and perhaps on the educational developments taking place.

Influencing job aspirations

A substantial part of unemployment in developing countries appears to be the result of a gap between employment opportunities and the aspirations of people with some secondary school or completed primary education—people aiming for jobs which would put them in the top half or third of the income scale.[1] Over the next decade or so there is the definite possibility of an inconsistency between policies designed to raise output and improve income distribution and those designed to alleviate this unemployment of middle-class aspirants to white-collar jobs and standards. Although reducing unemployment among the low-skilled is unlikely to conflict with output growth, reducing white-collar unemployment may well do so.

Just as industries and sectors differ in capital/labour ratios and in the functional distribution of income between labour and capital, so they also differ—quite widely in some cases—in the proportions of relatively low-skilled blue-collar labour, higher-skilled blue-collar labour, and white-collar labour they employ. Assuming, as is plausible, that the political power of the middle-class or aspiring middle-class group is greater than that of the lower-paid workers, one might anticipate an increasing tendency for policy to focus on the creation of higher-skilled and white-

[1] This interpretation is now a common one. A classic statement comes from India: " Moreover, 87 per cent of the families own their own land in this Block so that 'there is practically no unemployment, except of the educated', and that because, as Channabasappa of the village of Ragibonnanahalli put it, 'once they read they do not enter the fields. They want jobs in government service. Till they can find a job, they put on fine clothes and waste their time by riding about on the bicycle and drinking coffee. Even if we offer to give them coffee at home they prefer to go out. We old people do the work and feed the younger generation these days. Education is good. But once they get it they want to go away to the town.' " (Kusum Nair: *Blossoms in the dust* (London, Duckworth, 1961), p. 54.)

collar jobs, rather than lower-skilled ones.[1] Abstracting from such effects as this trend would have on the high-income group living primarily off its capital, it is clear that such a policy would worsen income distribution since those who would benefit from it are already relatively well off. And if the promotion of white-collar employment consists mainly in creating inessential jobs (as where government bureaucracy expands to sop up the excess supply of such persons), it seems distinctly probable that full use will not be made of the productive capacity of those employed in this way; hence the employment policy will result in the loss of potential output.

Two factors have contributed significantly to the problem of unemployment among those with high aspirations: *(a)* the relatively rapid expansion of secondary education and in some countries of higher-level primary, in large part in response to heavy popular demand (as reflected in the increasing share of students attending private schools), combined with *(b)* the continuing antipathy to blue-collar work as something demeaning and " lower class ". If both these factors are in effect constants, then the future unemployment picture looks gloomy indeed. Further, even were it politically feasible to limit the level of education, the restriction would usually be applied to public education, the component most easily and directly controlled by the government. Since public education represents the only chance for children of lower-income families, any such restriction would limit one avenue of socio-economic mobility and would worsen the income distribution, at least within a certain range.

An obviously important question is how readily aspirations are adjusted to real opportunities. Evidence from developing countries does suggest that there is some adjustment: in the face of continuous unemployment or declining income in an occupation, attitudes may gradually —perhaps even quickly—change.[2] Whether this flexibility characterises people at most levels of education, or attitudes towards most occupations, remains unclear; only accumulating experience in varying situations will provide the answer.[3]

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[1] Presuming a fairly refined reaction on the part of decision makers to pressures. Current decision making in most developing countries probably bears a somewhat disorderly relation to such pressures, due partly to lack of information as to what levers must be pulled to achieve a given objective. The fact that industrialisation has gradually veered towards white-collar and high-skilled blue-collar job creation has probably been largely an indirect effect of other forces.

[2] In several African countries it has been observed that the expectation by primary school graduates of obtaining certain types of white-collar jobs was adjusted downward rather quickly when an excess supply of such graduates appeared in that market.

[3] In some countries (e.g. Colombia, Venezuela) there is evidence of considerable intergenerational occupational mobility, but almost all of it within either the white- or the blue-collar categories; there is very little crossing of this line. See Carlos García: *Movilidad ocupacional* (Bogotá, CEDE, Universidad de Los Andes, 1968).

Even if this answer is a favourable one, there remains the danger that, before the negative attitudes of a given educational group towards certain occupations have given way, they may lead to policy measures to increase that group's opportunities in the preferred occupations—for example by making its educational level a requirement for certain jobs; in that case the forces (unemployment and declining income) that would otherwise have helped to erode the attitudes will be weakened and the attitudes are more likely to be self-perpetuating. In this context, it might be argued that some degree of unemployment may be desirable on the grounds that it will help to break down unreasonable aspirations and possibly lead to better income distribution, and that its optimal level is determined by weighing (at the margin) these two benefits against the economic costs of failing to use all available resources and the psychic costs borne by the unemployed.

Attitudes towards education in many countries are such that a policy of deliberate restriction cannot be countenanced publicly. But some scope nevertheless remains in how public funds are distributed among types of education, even at the same level—for example between academic and vocational education at the secondary level. Even if policy in this area can make only a modest contribution to controlling unemployment, the fact that education which leads to unemployment is unlikely to make much contribution to output [1] gives added importance to whatever can be done. Unfortunately the precise relation, in the short and the long run, between education and unemployment has been too little analysed to permit a refined approach.

Slowing population growth

The contention that rapid population growth generates unemployment tends to be the other side of the coin from the argument that faster output growth reduces it; the level of unemployment is seen as the outcome of a race between growth of output, which creates jobs, and population growth, which eats them up. As observed above, such a conception is dangerously oversimplified; admittedly, population control is perhaps the only one of the five policy recommendations examined here that runs little risk of producing undesired effects if imperfectly applied; but the arguments already presented suggest that its major benefits would more likely be better income distribution and faster growth of income per head than reduced unemployment. Unfortunately these benefits would not in general be reaped in the short run—which is no reason for deprecating population policy, but does justify looking elsewhere for the components of an over-all policy with immediate effects.

[1] Where fairly specialised training is involved this is obvious. Where education serves more to produce expectations than capabilities, it is also probable.

Increasing the demand for labour through higher labour/capital ratios

Growing attention has recently been given to the proposition that both output and employment can be raised by inducing production units to increase their labour/capital ratios. At present firms do not choose the factor proportions which would maximise the total output of the economy (presumably owing to certain types of market imperfections); their capital intensity leads both to a less-than-maximum output and to a more skewed income distribution and/or greater employment difficulties. The existence of a labour surplus [1] or of powerful labour unions (probably the less frequent circumstance) can raise the price of labour to the firm above its social opportunity cost. Frequently the larger firms which hire relatively expensive labour have, at the same time, easy and low-cost access to capital, and these two market imperfections induce them to choose capital-intensive technologies. Their counterweight in the dualistic economy is a group of firms using labour-intensive technologies based on a lower cost of labour (frequently family members) and a higher cost of capital. In general it may be assumed that the optimal factor proportions lie between these two technologies—being closer to one or the other according to the relative size of the two sub-sectors.[2]

If this description of the typical structure of industry in developing countries is accurate, then a decrease in the variance of the proportions of labour and capital used by different firms would lead to an increase in output, and probably to an improvement in employment opportunities for the majority of the labour force. In the dualistic situation described it is true, obviously, that not everyone searching for a job with the higher wages characterising the capital-intensive sector will be able to get one. Whether the result of this labour market imperfection is unemployment or lower income for people working in the " other " sector depends on how that sector functions. With the more perfect labour and capital market conditions that should lead to a decrease in dualism, wages for the majority would be higher and fewer employment problems *per se* would be expected to arise.

Given the theoretical possibility that additional employment opportunities might be generated by a different use of the capital stock (i.e. by smaller differences among firms in capital/labour ratios), quantification of this effect calls for analysis of factor substitutability—over-all and in the

[1] That is to say, the existence of a sector or sectors with marginal product of labour below the wage or income level.

[2] In fact, the term " dualistic " is to a large extent an heuristic device to aid in the explanation of the principle in question. Situations with a bimodal distribution of firms in terms of the factor proportions they choose are probably not the norm; rather the firms lie along a spectrum whose two ends are far apart, and a higher share of the firms are clustered towards the two ends than would be the case in a neo-classical economy.

various sectors. Evidence from a number of developing countries demonstrates the *possibility* of a wide variety of factor proportions, but it remains unclear how much the demand for labour in a given situation can be affected by the manipulation of factor prices or other instruments. Evidence from Colombia, Japan and other countries indicates that factor proportions used in different production units of the same industry vary greatly, so if all of the existing technologies are considered to be alternatives, the economy has a wide range of choice.[1] It has been argued that many labour-intensive alternatives would not exist in the presence of perfect factor markets [2], but there seems now to be adequate evidence that many could compete satisfactorily and even expand under such conditions.[3] It is probable that the provision by the government of more information on labour-intensive techniques from other countries would help their competitive position.

Unfortunately for simplicity, the interesting question is not " what would the demand for labour be had no mistakes been made in the past in the choice of capital intensity of investment projects, and were the government and other institutions efficient learners and transmitters (to the private sector) of information on labour-intensive techniques used elsewhere? ". The real-world issues are: *(a)* " How far would manipulation of factor prices affect the demand for labour given that much capital is now installed, much has been learnt about the use of capital-intensive techniques but (probably) less about the use of potentially productive labour-intensive techniques, and adequate channels of information about labour-intensive technologies are lacking in the private and public sectors alike? " and *(b)* " What other policy steps could be taken to foster demand for labour and with what success? " Although it seems clear that attempts should be made to manipulate factor prices and improve factor markets in favour of labour-intensive techniques to the extent feasible and consistent with other objectives, there are undoubtedly practical problems that may limit the results that can be achieved in this way. It is therefore all the more important to consider complementary steps such as extension services to aid in technological change, adaptation, etc.

If, starting from the existing sub-optimal factor allocation, all options were open and broad manipulative powers were available to the government, there would not be a significant conflict between the goal of

[1] It must be borne in mind that, if the factor prices were changed, the composition of output would change, and even if factor substitution were limited in the majority of existing industries, this would not mean that it was limited for the economy as a whole.

[2] See, for example, Helen Hughes: " Industrialization, employment, and urbanization ", in *Finance and Development* (Washington), No. 1, 1971; also Stewart and Streeten, loc. cit.

[3] It seems clear that within a given industrial sector the labour/capital ratio decreases markedly with increasing firm size. And, at least in some sectors, the small firms (with higher labour/capital ratios) have higher output/capital ratios. In this connection, see John Todd: " Size of firm and efficiency in Colombian manufacturing ", Research Memorandum No. 41, Center for Development Economics, Williams College, Williamstown (Massachusetts).

improving employment opportunities, that of improving income distribution, and that of increasing output; rather these objectives would tend to be complementary. Labour-intensive firms are, almost by definition, intensive in blue-collar labour, usually in relatively unskilled (at least relatively low-paid) labour; increased emphasis on such firms and technologies should raise output (with given capital stock), improve income distribution and raise the demand for low-paid labour. The fact that, with full employment and efficient utilisation of all factors, there is a trade-off between goals may then be less of an issue; the obvious first step is to attain that situation of efficient resource utilisation.

Given the technical and political difficulties of achieving optimal policy in the real world, most alternatives considered are likely to be substantially inferior to what is technically possible. Only a few of the feasible alternatives normally receive serious consideration, and this group may even include ones which imply a decrease in either output or employment, since political constraints often promote consideration of extreme policies. The opportunity implicit in the fact that all the alternative combinations of policies considered may generate less of both output and employment than others that are technically feasible may be of little help to policy making in the short run, since knowledge and experience of the optimal combinations are lacking. Framing policies to move the economy as far as possible towards what is technically feasible is likely to require time and experimentation. Meanwhile, with less than optimal policies receiving consideration, some goals may indeed have to be sacrificed in favour of others. From the economist's point of view, however, and given the relative neglect of this area, it is more fruitful to emphasise the probable existence of policies having better implications for both employment and output.

A number of analysts have concentrated their attention on the relation between total demand for labour and changes in the sectoral composition of output rather than on the implications of intrasectoral changes in factor proportions. The potential effect on employment of changes in the composition of output by sector will be significant only if there is considerable flexibility of demand for the products of the different sectors; this is plausible if the effect of changed production composition on consumption can be reduced by changes in the pattern of foreign trade, as in the case of the proposal to export labour-intensive manufactures. And some authors have specifically posited large untapped local demands for certain products and made these central to their employment recommendations, as in the case of L. Currie's urban housing strategy.[1]

[1] For the first statement of this strategy, see Lauchlin Currie: *Operación Colombia* (Barranquilla, Cámara de Comercio de Barranquilla, 2nd ed., 1965); part of the current Colombian development plan, the policy is explained in National Planning Department: *Guidelines for a new strategy* (Bogotá, Italgraf, 1972) and debated in Corporación para el Fomento de Investigaciones Económicas: *Controversia sobre el Plan de desarrollo* (Bogotá, La Oveja Negra, 1972).

But other users of this approach seem *(a)* to have simply disregarded the demand side, implicitly assuming it is very flexible, and *(b)* to have let their analysis be determined by the breakdown of the economy into sectors used in national accounts; even if this general approach has validity, the specific sectoral breakdown used in national accounts is not necessarily an appropriate one. The implicit assumption of homogeneity within national accounts sectors is dangerously unrealistic. Sectoral policy is doubtless a component of a good over-all package, but is unlikely to be convincing unless the demand side is dealt with and care is taken in the definition of sectors.

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In summary, therefore, it appears that the first two employment policies considered—reduction of rural-urban migration and promotion of more rapid growth—appear at our present level of understanding to have little to recommend them.[1]

As regards the third recommendation, unemployment resulting from unrealistic aspirations might best be reduced by limiting education, but this seems a high-risk policy, especially in view of the implicit political problems. A significant attack on the attitudes creating the problem generally occurs only during social revolutions. Incentives to increase the demand for white-collar labour—parallel in principle to those which could be used for blue-collar labour—might well benefit that group, but in all probability at the expense of the lower-paid labouring class, so such a policy seems dubious at best. Slowing population growth is unlikely to reduce unemployment, either, at least in the short run.

Among the policy recommendations considered, incentives to increase labour intensity appear to offer the major hope of alleviating those employment difficulties associated with an objective lack of demand for relatively low-skilled persons. Bearing in mind both the seriousness of the " low-income employment problem ", and its possibly greater susceptibility to policy measures, the strategy of increasing demand for relatively low-skilled labour by altering the factor proportions chosen by firms deserves more detailed attention.

Some specific policy alternatives to raise demand for low-skilled labour

(1) Perhaps the most promising attack on that extreme employment problem (or unemployment, whichever manifestation presents itself) related to low incomes lies in improved international trade policy—speci-

[1] As employment policies; rapid output growth will normally be desired for its own sake, of course.

fically, by placing greater emphasis on exports.[1] In a number of countries import substitution industries—especially those appearing in the later phases of the substitution process—are highly capital-intensive, whereas some of the industries with an obvious export potential (such as wooden furniture, footwear, clothing and tourism) tend to be labour-intensive. There is ample evidence that many developing countries can export both to other developing countries and to developed countries, concentrating on labour-intensive products in which the developed countries cannot easily compete because of their high labour costs.[2] To take only one example, the Republic of Korea has increased urban and industrial employment rapidly by means of a dramatic export boom. Just how labour-intensive the exporting firms tend to be remains to be seen [3], but it is plausible at least to expect them to be more labour-intensive than import-substituting ones. This concentration on exports may be complementary to import substitution—it would be if, for example, exporting were not feasible until enough import substitution had been carried out to evolve a certain complexity of industrial structure; or it may be a substitute for import substitution, i.e. a stage to which a country could evolve quickly under optimal policy.

The world competition which is avoided in an import substitution policy, but which must be faced by exporters, has not only a generally positive effect on efficiency but also tends to push industries towards the use of more labour. In the absence of competition, firms sometimes appear to exercise a non-economic preference for capital intensity; when pushed against the wall, they develop more labour-intensive ways of doing things. An interesting case is the northern industrial region of Mexico which now exports extensively to the United States; in order to compete with the United States market it uses more labour-intensive techniques, even for the same product, than does the older industrial area around Mexico City, which tends to concentrate on import substitution and produces primarily for domestic consumption.

The usual policy measures designed to stimulate exports seem appropriate here, i.e. an exchange rate closer to equilibrium, good credit

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[1] Theoretically, some of the fiscal proposals discussed below are superior to the trade alternatives; but their practicality is much more limited.

[2] Studies giving attention to this question include Ian Little, Tibor Scitovsky and Maurice Scott: *Industry and trade in some developing countries: a comparative study* (London, Oxford University Press, 1970).

[3] Doubts are created by the fact that exporting often requires a large-scale operation; orders often come in minimal quantities, and the costs of doing business internationally tend to preclude very small operations. Since large-scale firms are seldom labour-intensive, very labour-intensive exports would seem unlikely. See, however, Susumu Watanabe: " Exports and employment: the case of the Republic of Korea ", in *International Labour Review*, Dec. 1972. An exception is the " exporting of value added " which occurs when foreign firms make use of labour in a developing country and export the final product, e.g. United States firms in northern Mexico. See idem: " Constraints on labour-intensive export industries in Mexico ", ibid., Jan. 1974.

facilities and the provision of complementary services like information and improved marketing services particularly relevant to the small-scale producer-exporter. From a theoretical point of view, trade with developed countries appears to offer a better chance of improving income distribution through employment creation [1]; but the restrictions placed on this trade by the developed countries constitute a barrier, and hence trade with other developing countries also warrants attention. Tourism, which has a large potential for employment creation—even though it may have certain undesired side effects—does not suffer from the same threat of protective barriers.

(2) Several suggestions in the broad area of monetary and fiscal policy have been made with a view to employment generation. If the low price of capital—possibly coupled with labour legislation, the influence of trade unions and other factors keeping wages above the opportunity cost of labour—induces capital intensity, an obvious possibility is to prevent firms from receiving subsidised credit. This would lead some firms to substitute labour for capital; firms that were unable to do so would be less able to compete with labour-intensive firms and their share of the market would decline. Capital markets cannot, of course, be made perfect overnight, but an obvious first step would be to abolish the subsidised interest rates that some borrowers enjoy, especially in countries where inflation is high and nominal interest rates are not raised in line with the inflation. Channelling credit successfully to labour-intensive firms, which are frequently small ones, may be harder but warrants serious consideration.

The second possibility in this area is to subsidise firms according to their labour input with a view to equating the price of labour and its opportunity cost, which is often alleged to be low or zero. This policy is often argued to be inapplicable; but the argument is unconvincing since a quite similar scheme—tax incentives to investment—is frequently advocated and even applied in developing countries. Investment incentives, borrowed from and much more appropriate to developed countries, appear at least as likely to do harm as good [2]; the evidence from a few studies of developing countries is that they have very little effect one way

[1] The comparative advantage of a developing country over a developed one lies particularly in labour intensity; in trade among developing countries, the history of growth of the countries concerned and similar factors are of greater importance.

[2] The policy is framed for a situation where *(a)* for some reason there is too little incentive for firms to invest, so that demand for investment goods is below supply, and *(b)* output expansion depends primarily on growth of the capital stock, and can therefore be effectively stimulated by making capital cheaper. But many developing countries have an excess demand for capital goods (which must be restrained by licensing imports of these goods) and a parallel excess demand for bank credit. Stimulating the demand for capital goods when it is already too high is purposeless. Worse, tax exemptions for investment do precisely the wrong thing when they encourage the use of the economy's scarce factor by making it cheaper to firms.

or the other on investment[1], whereas they worsen the government's financial situation.

The potential of both interest-rate manipulation and subsidies to the use of labour has been viewed with pessimism. It is argued that firms have little choice in the relative amounts of labour and capital they use, and cannot react flexibly to the relative cheapening of labour; this is doubtless true and places a limit on the short-run impact of the policy. For the long run, however, the argument that in some industries it is simply not possible to be labour-intensive has limited relevance, since the policy will prevent such industries from starting in the first place. New firms would concentrate in the labour-intensive industries, which would be more competitive once factor markets had been brought closer to equilibrium.

What does cast doubt on the potential of manipulating interest rates is the fact that the major source of capital of most firms is their internal funds, i.e. they depend only to a limited degree on the credit market. If large firms control most of the new funds becoming available for investment each year, it is improbable that they will make them available through the credit market to more labour-intensive firms; even if the rate of return in the latter firms is substantially higher, the large charges typically made by intermediaries in developing countries make such transfer highly unlikely. When a small firm's output is complementary to the activities of a large firm, transfer occurs, as is well documented in Japan and elsewhere, but not through the credit market. Facilitating these complementary relationships is important, of course, but if public policy can only affect the factor proportions and stimulate the growth of firms which must borrow, it may fail to influence many large, powerful, capital-intensive monopolistic firms—the very ones that it would be most desirable to curb.

Similar obstacles seem inherent in a policy of labour subsidies, but they are not insurmountable. Since it is often difficult to get budgetary funds allocated firmly, a programme of subsidies may not be sufficiently convincing to have the desired effects and it may therefore be preferable to achieve the same results by means of tax deductions. Firms for which such deductions could be valuable—the relatively large and usually capital-intensive firms which would be paying taxes—are also the ones for which an incentive to greater labour use is most needed, which is a further argument in favour of having recourse to the method of tax deductions.

(3) A less promising line of attack is to improve the functioning of the labour market. Many imperfections (for example those caused by unions, firms having monopsony power in the market, etc.) are difficult to

[1] See, for example, R. E. Bilsborrow and R. C. Porter: " The effects of tax exemption on investment by industrial firms in Colombia ", in *Weltwirtschaftliches Archiv* (Kiel), Vol. 108, No. 3, 1972; a theoretical discussion is presented in Alan Peacock and G. K. Shaw: *Fiscal policy and the employment problem in less developed countries* (Paris, Development Centre, OECD, 1971).

deal with; lack of information and of good advice may more easily be remedied. Most labour markets (i.e. the markets in which most individuals find their jobs) appear to generate wage rates reasonably close to the equilibrium level [1], for example unskilled labour markets in which minimum wage legislation and especially fringe-benefit legislation have not been widely applied.

(4) Among the suggested policies focusing on the sectoral composition of output, the most interesting is the integrated development strategy put forward by Currie, with an urban housing programme as a key component. The underlying premise that this sector is labour-intensive is strongly supported by the data from Colombia [2], and the premise that demand is expansible [3] has been borne out by events to date in that country, where new financial intermediaries have been set up to channel savings into urban housing and have been met by a buoyant demand. Critics have argued that the policy will generate only a short-run boom, since the demand must eventually cease to grow as a share of national income; whether this latter condition is very damaging depends essentially on the programme's multiplier or linkage effects on other sectors; if these are potent enough, the impetus would be maintained. The question can be answered only by the events of the next few years.

Conclusions

Accumulating evidence points to two distinct employment problems in developing countries; the first is related to a low aggregate demand for labour and afflicts primarily the low-skilled worker, though it does not necessarily or generally manifest itself in the form of open unemployment; the second is related to the failure of the economy to generate enough white-collar (or more generally, " desirable ") jobs to satisfy the aspirations of the expanding group of relatively educated persons, and to their consequent decision not to work at all rather than to accept jobs that fall short of their desires. The relative seriousness of the two phenomena varies with the country and with one's standpoint. It appears that most prescriptions for employment ills have been directed towards

[1] This does not necessarily imply an efficient over-all allocation of labour, however. If the supply price of labour to the " modern " sector is above its social opportunity cost, the equilibrium wage corresponds to too little employment in that sector.

[2] According to calculations by the author, the jobs per unit of output ratio was about twice as high as for the economy as a whole and three times as high as for manufacturing industry.

[3] Demand for housing services is generally believed to be income-elastic over time. A good review is Martin Paldam: " What is known about the housing demand? ", in *Swedish Journal of Economics* (Stockholm), June 1970. The Colombian programme envisages taking advantage of that fact, but also lowering the real price of houses by improving the efficiency of the market in various ways.

the first problem, and that none of the common recommendations is likely to help much in resolving the second, which therefore requires more careful and detailed attention. Still, a strong case can be made that the low-skill employment problem is the more serious. Of the five strategies discussed here—namely reduced rural-urban migration, faster economic growth [1], controlling the growth of education, slower population growth, and altered factor proportions—the first two seem of doubtful value; both theory and (still limited) empirical observation support this view. Restructuring the educational programme should have an effect primarily on unemployment arising from unrealistic aspirations. Population policy is unlikely to show quick results. Only a policy of altering factor proportions seems to be viable, and several of the specific suggestions made, such as fiscal incentives and the encouragement of labour-intensive exports, are clearly worthy of serious consideration.

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[1] As mentioned earlier, both faster economic growth (probably) and slower rural-urban migration (possibly) would result from an effective " factor proportions " policy. The point, however, is that they are not means to the goal of better employment, but joint products of the same policy. Treating them as solutions could be counter-productive.