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EMPLOYMENT AND DEVELOPMENT:

THE PROBLEM AND SOME POLICY ALTERNATIVES

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OUTLINE

(Paragraph numbers in parentheses)

1. Development should result in improvement in the material well-being of people. Productive employment is the way in which people participate in the benefits as well as the tasks of development. Economic growth during the sixties has glaringly failed in most developing countries to provide sufficient employment for their exploding labor forces. Employment creation has therefore emerged as a major development challenge of the seventies. This paper briefly sets out the background of the employment issue, brings together current views concerning the chief obstacles to employment generation and suggests how employment considerations can be taken into account in aid programs and development policies. Although the suggested policies are not intended as a blueprint for every country, it is believed they have enough general applicability to merit serious consideration by all recipient countries and donors. The final choice of policies and programs required to improve employment generation in any given country can only be determined after a systematic analysis of that country's problems. This new emphasis on employment should not be construed as excluding consideration of other factors but rather as including employment along with other important factors which need to be considered in any analysis of development policy and strategy.

2. Employment has only recently been widely recognized as a major development problem. Traditional forms of rural unemployment, such as part-time or seasonal unemployment, have long been recognized as a common feature of underdevelopment, but the prevailing belief a decade ago was that this under-utilization of labor would gradually disappear with economic

growth. But unemployment statistics, which have only recently become available for more than a handful of LDCs and are still woefully deficient as a basis for policy formulation, indicate that full-time or "open" unemployment in many LDC cities has reached levels ranging from ten to twenty percent of the labor force. These levels of unemployment currently being recorded in spite of economic growth (even in some of the fastest growing countries, such as Jamaica and Morocco) exceed anything experienced in the West since the Great Depression of the thirties.[1/]

3. LDC unemployment reflects poverty, a waste of human resources, and a potential for social and political unrest. Because of this multi-dimensionality, no single statistical measure adequately depicts the extent of the problem. The above cited data on "open" unemployment follow the Western definition which counts as unemployed only those without any work but actively seeking it. These may provide some warning signals about potential for unrest (see para. 4 below) but they provide only a partial measure of the waste of human resources from unemployment. The existence of high unemployment may deter some people from even seeking work. There will be another large group who work part-time or sporadically and would

1/ See David Turnham (with the assistance of I. Jaeger), The Employment Problem in Less Developed Countries, A Review of Evidence (Paris: OECD, 1970) pp. 74 to 77, 193 to 195 and 213 to 220. Of the almost forty countries for which data are presented, almost half show rates of open urban unemployment above ten percent of the labor force. Four of six countries for which time series are shown (p.56) indicate increases in unemployment in the sixties. Also see Organization of American States, Employment and Growth in the Strategy of Latin American Development: Implications for the Seventies, (OEA/Ser.H/X.19, CIES/1641 rev. 1, August 19, 1971), which reports a continent-wide increase in open unemployment in Latin America from 5.6% in 1950 to 11.1% in 1965, p. 2.

like more work. It has been estimated that these sources of unemployment would yield a rate of "underutilization of available labor time" in Latin America in 1960 of twenty-five percent.2/ But the poverty dimension of unemployment can ultimately only be measured by income data. This is because the "labor time" approach ignores the low-productivity employed and self-employed who are forced to work long hours to obtain any income.3/ Available data on changes in income shares received by the poorest 20 percent of income recipients in several LDCs suggest that relative if not absolute poverty is increasing.4/

2/ Estimate by Erik Thorbecke, as reported in OAS, op. cit., pp. 3 & 5.

3/ This suggests that full-time unemployment may be a "luxury" which only those with an independent source of income can afford. Thus, a high proportion of the LDC unemployed tend to be young, new entrants to the labor force who may be able to rely for some time on assistance from families. Likewise, it has been suggested that the very low rates of open unemployment in India may be explained by India's extreme poverty. But Ceylon and East Pakistan are as poor and record much higher open unemployment even after attempted correction for differences in definition and data-gathering methods. Clearly, we need to know a lot more about the characteristics of the unemployed in order to explain such differences. See Ronald G. Ridker, "Employment and Unemployment in Near East and South Asian Countries: A Review of Evidence and Issues," in Ronald G. Ridker and Harold Lubell, Employment and Unemployment Problems of Near East and South Asia, Volume I, (New Delhi: Vikas Publications, 1971), pp. 11-15.

4/ David Turnham, in "Income Distribution: Measurement and Problems," Society for International Development, 12th World Conference, Ottawa, May 16-19, 1971, finds that the percentage of income received by the bottom 20 percent of income recipients has decreased in 6 of 8 LDCs for which he was able to obtain data (p.11). The six are Argentina, Ceylon, Mexico, Panama (City), Philippines, and Puerto Rico. The two in which the share has increased are India and Taiwan. Turnham argues that the share in India may have in fact also fallen.

4. Whatever the measure, there is general agreement that current LDC unemployment poses serious economic, social, and political problems. It means that a large segment of the population is not sharing in the tasks or benefits of development. While it is true that some countries have grown fairly rapidly in spite of high and growing unemployment, the political and social cost of neglecting employment creation may be very high. The potential for unrest spawned by unemployment may increase as traditional family support systems erode with increasing urbanization of the labor force and as increasingly more educated workers become impatient with joblessness.[5/] Moreover, growth itself is not as rapid as it could be if labor were more effectively utilized. Developing countries which have managed to expand employment rapidly, such as Korea and Taiwan, have also been among the fastest growing countries in the world.

5. The fundamental factor underlying the unemployment problem is the LDC population explosion and resulting acceleration in labor force growth. In coming decades LDCs will have to deal with labor force growth rates of 2 to 3 percent a year which exceed by fifty percent or more those ever experienced by currently developed countries.[6/] The urban manifestations

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5/ Better data on the characteristics of the unemployed would shed more light on these questions. An important characteristic is the duration of unemployment. Although a high rate of open unemployment represents a blatant waste of human resources in any event, the potential for unrest will likely vary with the average duration of unemployment experienced by the unemployed. This unrest potential of unemployment appears quite high in at least one country (Colombia) where data indicate that a third of the urban unemployed have been unemployed for a year or more and two-thirds for more than three months. ILO, op. cit., p. 359

6/ Turnham, The Employment Problem..., op. cit., p. 34. For historical labor force growth rates in the now developed countries, see S.K. Singh "Aggregate Employment Function: Evaluation of Employment Prospects in LDCs," Basic Research Center, IBRD, (Mimeographed) November 1969, pp. 62-65.

of unemployment are further aggravated by rural-urban migration on an unprecendented scale. In agriculture, the impact of such technical changes as tractorization on rural employment will depend upon size of tractor and kind of crop and soil, but it will also depend upon resulting profitable changes in farm practices and institutions: an increase in multiple-cropping may increase demand for labor; consolidation of land holdings may intensify rural unemployment as well as give an added push to rural-urban migration.

6. The task for LDCs is to bring about higher labor force absorption with economic growth. This requires simultaneous action on several fronts. One reason is that the employment problem is both of a short run and a long run nature. Policies must be devised to expand employment opportunities for the existing unemployed and coming labor force entrants who have already been born. Increased saving will permit a faster rate of growth of output and employment. But the additional saving required to employ new labor force entrants, let alone the existing unemployed, is likely to be beyond the reach of most countries unless the allocation of saving is improved.[8/] In other words, not only is more growth required, but the

7/ See monograph by Robert Shaw, Jobs and Agricultural Development, Overseas Development Council, Washington, D.C. 1970 and M. Yudelman, G. Butler and R. Banerji, Technological Change in Agriculture and Employment in Developing Countries (Paris: OECD, 1971).

8/ The above quoted paper by Singh estimates that to fully employ increments to the labor force in a typical African country would require an 11 percent GDP growth rate, 10.2 percent in an Asian country and 9.3 percent in a Latin American country. Note that this would not cut into the already existing pool of unemployed (Singh, op. cit., p. 60).

composition of growth must be altered so as to increase labor absorption. Finally, effective population policies are fundamental to a long run solution of the employment problem: a successful population program will help keep the gargantuan employment generation task of coming decades within manageable proportions.

7. There is increasing concern that the inter-related impact of trade, exchange rate, fiscal, and credit policies followed by many LDCs has been to under-price capital, thereby encouraging capital intensive production and a wasteful use of scarce capital.[9/] Over-valued exchange rates plus special privileges for importing capital such as free licenses or preferential or zero tariffs have combined to give a powerful incentive to import capital equipment. In addition, credit is often subsidized at interest rates fixed at very low or negative (given inflation) real levels. These benefits plus special fiscal subsidies, such as rapid depreciation allowances and tax holidays on new investment, add up to enormous inducement to invest in capital-intensive techniques, to invest in capital-intensive branches of industry, and to invest far ahead of demand in these branches.

9/ Two recent studies which effectively make the case for this presumed impact and which have gained considerable attention are Ian Little, Tibor Scitovsky, and Maurice Scott, Industry and Trade in Some Developing Countries, A Comparative Study (London: Oxford University Press for the OECD, 1970), and ILO, Toward Full Employment, A Program for Colombia (Geneva, 1970). There is an urgent need for careful empirical studies of the actual as opposed to the presumed impact of these policies.

8. The intended objective of many of these policies was to stimulate investment, output growth, and - as a by-product - employment. They have clearly played an important role in initiating industrialization in many countries but they have often been designed with little regard to their effect on the pattern of resource utilization. One of the main recommendations of this paper is to redesign, not abolish, incentives so as to encourage more labor-intensive foreign and domestic investment in import substitution, export and traditional industry. It means a re-structuring of incentives so as not to bias investment into capital-intensive techniques or lines of production. New incentives to invest which would encourage entrepreneurs to take advantage of the relative abundance of labor include realistic exchange and interest rates, moderate unified tariff rates, and fiscal incentives based on profit rather than amount invested. Experience indicates that these redesigned incentives need not depress overall investment and output growth. On the contrary, they should stimulate additional investible resources, better use of capital, and a higher rate of output growth as well as employment growth.

9. On the labor side, similar concern has been expressed that the government in its role as employer (which is often very substantial) or as regulator of private sector wages through wage boards and labor courts, has encouraged rapid wage increases which have discouraged employment

growth in the "modern sector" (factory industry, public utilities, governmer and large-scale trade and finance) both directly and indirectly by encouraging adoption of capital-intensive techniques. There is no question that a government has an obligation to prevent employer exploitation of workers. But a government has a corresponding obligation to the unemployed who will stand a better chance of obtaining a relatively high-paying modern sector job if urban minimum wages bear some reasonable relationship, after allowing for difference in cost of living, to rural incomes, and if real wage increases in the organized labor market follow some reasonable guide, such as productivity growth. In addition, such labor legislation requirements as rigid and costly restrictions on individual or collective dismissal and high wage premia for extra shift work but low premia for overtime, are alleged to encourage adoption of capital-intensive techniques and/or expansion of overtime instead of hiring additional workers It is difficult to understand why, in the face of unemployment, legislation should make overtime relatively attractive to employers compared with multiple shift work. Likewise, rigid dismissal restrictions which were intended to improve job security may in fact reduce job security by encouraging employers to hire only on a temporary basis. A faster rate of growth of employment should provide more job security to both employed and unemployed.

10. Other factors have aggravated the capital-intensive trend of production. These include a government policy bias in favor of large firms and farms supported by the political power of large-scale entrepreneurs. Policies concerning location of credit institutions,

10/ See the ILO, op. cit., Chs. 13-14, for examples.

infrastructure (from power and other public utilities to schools and hospitals), and such government offices as import licensing agencies, have typically favored large urban centers, often only the capital city. These policy biases have probably served to stimulate even more migration ("one new job creates two new applicants"). The unequal income distribution which these policies have served to perpetuate and perhaps accentuate may give rise itself to a highly capital and import intensive pattern of consumption demand.[11/]

11/ A documented case-in-point on policies biased in favor of the capital city is Colombia as analyzed in USAID, Colombia, Country Field Submission Annex G, Fiscal Year 1972, (Washington, 1970).

The net effects of a relatively equal versus unequal income distribution in developing countries has been the subject of considerable speculation and theoretical debate but until recently little empirical research. A well-known *a priori* argument is that the more skewed the income distribution the higher the share of savings in national income. A recent empirical paper by William Cline of Princeton University finds that available data on income distribution and saving by income class in Latin America indicate a redistribution of income to that currently prevailing in the U.K. would cost a sacrifice, *at most*, of about one percent annual GNP growth in Brazil and Mexico, less in Argentina, and little or none in Venezuala. He also finds this income redistribution would shift total demand from such industries as automobiles, rubber, and electrical materials to agriculture, food products and textiles. He conjectures *without evidence* that this shift would result in an increase in employment by shifting demand from relatively capital-intensive to relatively labor-intensive sectors.

This relationship between income distribution and employment via the pattern of consumption demand is now being *empirically* researched by Professors James Land and Ronald Soligo for the Program of Development Studies at Rice University and the Economic Growth Center at Yale University.

The Cline paper is "The Potential Effect of Income Redistribution on Economic Growth in Six Latin American Countries," A.I.D. Research Paper, Document V-62 (Washington: 1970).

11. How have aid programs and policies affected employment generation in the developing countries? To begin with, some aid programs have had at least in theory a major potential for expanding employment. A significant proportion of U.S. assistance has been in the form of program aid which may be used to import raw materials and expand employment through fuller utilization of existing capital.[12/] To have the maximum employment creating potential there is in principle no reason why consumer goods should not be added to the list of eligible imports under a program loan for a country with a foreign exchange constraint so severe that total consumer goods supply would fall short at existing levels of demand and income. Concessional food sales under Title I of U.S. Public Law 480 have in fact been viewed as program aid. These sales, which have assumed large proportions in several countries, expand employment by permitting non-inflationary expansion of government expenditures. In addition both the FAO and the U.S. (through Title II of PL 480) have provided food as payment for labor on public works and community development projects. Existing evaluation of these programs suggests that they have been significant in only a handful of countries (e.g., E. Pakistan, Indonesia, Korea, Morocco and Tunisia) and relatively successful in even fewer. Major problems include management, local attitudes toward communal work, and such issues as payment-in-kind versus cash wages. Some donors have also financed local costs for such programs as shell-site-service, self-help housing and credit to small-scale industry and agriculture. These forms of assistance have a particularly high employment-creating potential because they are labor

12/ Taking full advantage of this potential depends upon LDC policies as well. For example, the import allocation system may restrict materials imports to one-shift operation requirements.

intensive to begin with or they complement rather than substitute for labor. They deserve serious consideration for further expansion and for adoption by other donors.

12. Both multilateral and bilateral donors have provided both technical and capital assistance to education and training in LDCs. Theoretically, this form of assistance attacks the employment problem from the supply side by converting what would be unemployed unskilled labor into employable skilled labor. Unfortunately, this assistance has not prevented some LDC educational systems from producing an oversupply of some skills and professions, from addition to open unemployment rather than skilled employment. Education raises both aspirations and the capacity to initiate social and political action. If these aspirations are frustrated by unemployment, the educated unemployed will become the natural leaders of discontent, as demonstrated currently in Ceylon.[13/] Foreign assistance need not exacerbate this problem. In India, for example, technical institutes provided with foreign assistance seem to do a better job preparing engineers for employment than other institutions. Donors should nevertheless pay much more attention to the relevance of their assistance to the <u>needs</u> of the labor market at <u>all</u> levels of education. This will be difficult given the primitive state of our knowledge about this relationship. But the importance of progress in this area remains

13/ The about-to-be published report of the 1971 I.L.O. employment mission to Ceylon is expected to document the extent of unemployment among the educated and their leadership role in recent unrest.

undiminished. The functioning of the labor market, especially in terms of the level and quality of information about job openings, is a related subject which deserves more attention. A.I.D. in particular has provided assistance for establishing and expanding employment services and for improving labor market statistics. Labor statistics nonetheless remain woefully inadequate as a basis for formulating employment policy.

13. Other aid policies and practices have unfortunately tended to reduce the employment-creating potential of external aid. It has been argued that donor refusal to (1) finance local costs, (2) forms of aid other than project aid or (3) procurement from other countries has restricted recipient countries in the range of choice of aid-financed technology which could take most advantage of their abundant unskilled labor and local materials.[14/] While further untying of aid in these directions would extend this range of choice, it is likely that (1) aid-provided foreign exchange which has been used to finance local costs has also been used to import capital-intensive technology and (2) the employment-generating potential in the already available choice of project technology from a given donor country has not been fully realized. An important reason why both these conditions have probably prevailed is that donors have readily - if tacitly - accepted as given LDC economic policies which artificially encourage capital-intensity. They have supported a number of devaluations

14/ Hans W. Singer, "International Policies and their Effect on Employment," Overseas Studies Committee Conference, Cambridge University, 1970.

in the past two decades, yet the way in which over-valued exchange rates, preferential tariffs, and special credit arrangements have distorted the cost of imported capital has not been a point of major contention in discussions preceding such support. Given these distortions, aid has naturally been used to import capital-intensive technology. This inducement is enhanced by some donor-provided "package deal" project loans which entail,for example, implements, parts, repair services, and operator-mechanic training with heavy tractor loans.

14. Donors have also provided inappropriate "soft" technology or technical assistance. This includes all aspects of the transfer of technological information, ranging from engineering advice on a specific project (such as roads, irrigation projects, plant design, etc.) to assistance in institution building in broad fields like agriculture, public administration and the training of individuals from developing countries in a wide variety of fields. When transplanted to developing countries, engineers, managers, administrators, agricultural advisors, and economists from developed countries think in terms of their labor-scarce, capital-abundant economies. Relatively uncritical acceptance of their advice has reinforced the bias in favor of sophisticated, high standard, but labor-saving equipment. In agriculture, donor country advisors steeped in the ethos of a labor-scarce rural setting have often endorsed expensive, labor-displacing, heavy agricultural machinery to increase output per man instead of looking for labor-using innovations (new equipment designed for small

farms, multiple-cropping methods, etc.) to increase output per acre. Similar problems exist in training programs of all kinds. Those trained in developed country institutions bring back conceptions based on DC economic environments and impart them to LDC students and colleagues and build them into LDC institutions. All these channels have tended to provide advice which has reduced the employment-creating potential of investment and external aid. In all fields (e.g., agriculture, industry, government, education, health), developed country advisors must consider the employment implications of their advice.

It should be noted, of course, that not all this advice has been "inappropriate" for the economic environment of LDCs. One of the most important contributions which donor scientists and technicians have made is the development and diffusion of the new high-yielding wheat and rice varieties. The new varieties *per se* do not result in the displacement of labor. The crucial determinant is whether government policy permits the profit-making opportunities opened up by the new seeds to encourage large land holders to evict their tenants and/or acquire more land (see sources cited in footnote 7 Donor country advisors encourage this displacement by recommending heavy agricultural machinery without investigating the extent to which other technology would make existing small farmers as productive (or even more productive in output per acre terms) as large farmers in use of the new varieties (see paragraph 18 for more on the efficiency of small enterprise).

15. Reduction of unemployment will take time and will require action on many fronts. The sine qua non condition for progress is that LDCs recognize the employment problem and take it seriously, that planners and administrators consider the employment implications of every program, policy, and practice, that employment becomes an integral part of plans and investment programs, not relegated to a pious prescription in a Plan chapter on human resource problems.

16. External aid in the final analysis is effective only to the extent that it supports programs desired and mounted effectively by the LDCs themselves. Providing these conditions are met, aid donors can take the following specific steps to increase the labor absorption potential of their aid: give employment considerations prominence in providing technical assistance, take employment into account in project appraisal by using realistic or "shadow" prices for capital and labor, assist LDC programs for increased credit and technical assistance to small-scale farmers and industrialists, expand support for productive rural and urban public works, aid research and development of labor-using technology in promising sectors (small scale agriculture and selected industries), and pay more attention to employment aspects of location.[15/] All of these are important but all are bound to have only limited success and some may have no effect at all on employment unless the costs of capital and labor in LDCs are brought more in line with scarcity values. The

15/ Direct assistance in some of these areas (e.g., rural public works) is possible only for project and sector assistance. But even in the case of program loans it should be possible to indirectly support these efforts in dialogue and discussion with officials of the recipient country.

reorientation implied by some of these steps will run against such deeply ingrained prejudices as a tendency to think in terms of developed country economic and technical environments and reluctance to manage large groups of untrained labor. But these so-called prejudices are at least in part rational, given artificial incentives to employ capital-using labor-saving technology. Oratory alone will not overcome them. The advisor or planner who recommend that a greater weight be given to employment when financial incentives favor capital must swim against a strong current.

17. To begin with, aid untying may not produce a more vigorous search for sources of labor-intensive equipment if LDC macro-economic policies continue to make it attractive to import the capital-intensive variety. Similarly, donors could value the costs of aid-supported projects in terms of realistic or so-called "shadow" prices for capital and labor which reflect their relative scarcity and abundance rather than the existing market prices. This would mean using a realistic rate of exchange and tariff to value the imported capital equipment in local currency, omitting tax holidays, and using a realistic (i.e., higher) rate of interest to discount benefits and costs. It would also mean valuing the cost of labor not by market wage rates and legally required fringe benefit cost but by its "opportunity cost" or the value of production foregone in the next best alternative employment opportunity for that labor (or its welfare support cost). Note that the emphasis on costs here does not imply omission of benefits in the analysis. The value of both direct and indirect benefits as well as costs should be included. These indirect or external benefits and costs include estimates of the effects of non-market factors, such as

pollution, and "linkage effects" via stimulus to supplier or customer industries. It is important that these costs and benefits in linkage industries also be valued at shadow prices, for they may be substantial. Estimated direct and indirect project benefits net of costs valued at realistic factor prices will clearly make labor-intensive projects relatively more attractive than when capital is under-valued relative to labor.

The possibility of using shadow prices in project appraisal has been discussed for some time. But decisions to give external aid continue to be made on the basis of market prices. One reason for this is undoubtedly the difficulty of determining the correct shadow prices, particularly in the case of labor. But the determination of realistic capital costs is less difficult and ambiguous. Recent analysis of tractor loans indicates that taking into account under-pricing of capital alone would substantially lower their estimated rate of return. Another possible objection to shadow pricing is that while it may provide a criterion for rejection of projects profitable at market prices but unprofitable at realistic prices, it does not "reward" projects unprofitable at market prices but profitable at realistic prices. But this is not a deficiency of the shadow pricing technique *per se*. Such projects could be covered by a subsidy financed either by foreign assistance or by general tax revenues (by how much which tax rates might have to be raised is an important but separate question). A more serious objection is that when market incentives favoring capital-using, labor-saving technology are strong, shadow pricing must buck strong contrary pressures when it implies reward or rejection of projects. Nonetheless, if donors really insisted on shadow pricing, the role of prices in influencing employment would soon receive genuine attention from policy makers.[16/]

18. Small-scale agriculture and industry should play an important part in any employment-oriented development strategy. While empirical evidence supports the general belief that small-scale units use more labor per acre or per dollar of capital invested than large-scale units, a substantial body of opinion supported by some empirical evidence holds that small-scale units are less efficient in their use of scarce resources (output per acre or per unit of capital is less). But there is increasing counter-evidence; namely, that small-scale enterprise is more efficient than large enterprise in its use of scarce resources. There are two important considerations here: (1) the economic case for small-scale enterprise will naturally be stronger when shadow or realistic prices are used to value its output and inputs and (2) in order for the employment and efficiency advantages of small-scale enterprise to be realized, it must be provided with access to such resources as credit, technical assistance and marketing services. A viable small-scale agricultural sector may require in addition effective land tenure legislation to check consolidation and labor displacement or to create more small-scale units where large-scale, land-intensive

16/ For further references on shadow pricing, see I.M.D. Little and J.A. Mirrlees, Social Cost Benefit Analysis, Volume II of Manual of Industrial Project Analyses (Paris: OECD, 1969) and United Kingdom, Ministry of Overseas Development, Manual of Project Appraisal (London: Ministry of Overseas Development, 1970).

units predominate.[17/]

Upward revision of unrealistically low or negative (given inflation) official interest rates is a necessary if not sufficient condition for ensuring better credit availability to small scale entrepreneurs.

17/ Output per acre has been found higher on small farms in several LDC's (e.g., Brazil, Colombia, India, and Mexico, as reported in Peter Dorner and Herman Feltehausen, "Agrarian Reform and Employment: The Colombian Case," International Labor Review, September, 1970). In industry there is conflicting evidence. A World Bank report finds rates of return on capital higher in large firms (IBRD, South Asia Dept., India - A Review of Trends in Manufacturing Industry, Volume I, the Main Report, December 1, 1969. p. 57). A recent study by Albert Berry finds value added per unit of fixed capital higher in small firms in India (see Albert Berry, The Relevance and Prospects of Small Scale Industry in Colombia (mimeo; New Haven: Yale University Economic Growth Center, October, 1971), p. 43a. The discrepancy may be explained by a high windfall economic rent element in the profits of large firms. Another explanation might be differences in industries sampled. There are undoubtedly some industries where economies of scale are significant. In any event, Berry reports similar findings for Japan, Pakistan, and Mexico (ibid.). A recent paper by John Todd finds value added per unit of installed horsepower higher in firms with less than 200 employees than in larger firms in Colombian manufacturing as a whole and across a broad range of individual industries (see Todd, Size of Firm and Efficiency in Colombian Manufacturing, Research Memorandum No. 41, Center for Development Economics, Williams College, Williamstown, Massachusetts, October, 1971, p. 47). Note that the distinction is not between cottage artisans and factory industry but between relatively small scale factory industry and large scale factory industry. Also see data and sources reported in Harry Oshima, "The Labor Force Explosion: and the Labor-Intensive Sector in Asian Growth", Economic Development and Cultural Change, January 1971, pp. 165 to 169, and in Keith Marsden, "Progressive Techniques for Developing Countries," International Labor Review, May 1970, pp. 488-489; "Towards a Synthesis of Economic Growth and Social Justice,: same journal, November 1969, pp. 410-412; and "Integrated Regional Development: A Quantitative Approach," same journal, June 1969, pp. 644-646.

These findings do not, of course, demonstrate that total output would increase if more resources (credit, technical assistance, and marketing services) were made available to small-scale enterprise (or if large-scale enterprise were broken up into smaller units). But they provide strong circumstantial evidence. See Berry, op. cit., and Todd, op. cit. for further discussion.

When a substantial portion of credit is made available at subsidized interest rates, demand exceeds supply, and the government must ration the credit by some other criterion than ability to pay. Large firms with political power are typically able to obtain this cheap credit. The small firm must pay extremely high curb market interest rates to obtain any credit. Raising official interest rates to realistic levels may improve credit availability to small firms in 2 ways: (1) excluding inefficient large firms who cannot pay higher interest rates and (2) attracting a greater supply of private saving (this increase in total credit availability may even force curb market interest rates down).[18/]

19. Another advantage of these programs aimed at low income unemployed and under-employed laborers and entrepreneurs is that they are likely to spend most of their increased incomes on labor-intensive, domestically-produced consumer goods and thus expand the demand for labor. In other words, such programs should have both a high <u>direct and indirect</u> employment effect.[19/] They should, moreover, increase the equality of income distribution as compared with present policies which tend to provide higher incomes for a smaller group of persons, many of whom are already wealthy.

18/ The Korean interest rate reform of 1965 apparently resulted in a substantial net increase in the supply of domestic savings and the availability of bank credit. In particular, the evidence indicates that the increase in bank credit did not result from a transfer of funds out of the private money market. Thus, small enterprises should have shared in this greater credit availability. See Gilbert T. Brown, <u>Economic Policy and Development: Korea in the 1960's</u>, a draft A.I.D. Research Study (1970), Chapter 6, p. 14.

19/ This subject is currently receiving systematic empirical research. See footnote 11 for further discussion.

20. Research in developing countries on adaptation of existing or development of new, more productive labor-using technology for small-scale enterprise is an important candidate for substantial donor support. A beginning but not unimportant focus could be improved low-cost implements, machinery, processes and methods for small-scale agriculture. Industry is a more complex problem which would have to be approached on an industry-by-industry basis. Candidates for appropriate R & D are obviously <u>not</u> basic steel or petro-chemicals but <u>selected</u> food processing, textile, clothing, wood products, and metal fabricating and machinery industries. But again, <u>unless LDC economic incentives are changed, there will be no demand for such research and LDCs will not allocate either funds or priority to it.</u> And if they are, considerable spontaneous local adaptation and innovation of labor-using technology should occur.

21. A case based on employment considerations can be made for paying more attention to spatial decentralization of urban growth. The available evidence suggests that costs of infrastructure expansion are at least not higher in smaller cities than in the capital metropolises of LDCs. Some of the largest urban centers may be running up against geographical constraints where per capita expansion costs are significantly higher than in medium-sized and smaller cities. There is additional evidence that both consumption patterns and infrastructure requirements may be more capital intensive in large LDC cities than in small cities. Many of the input, marketing, processing, and consumption needs of small-scale farmers can be effectively met by small-scale, labor-intensive enterprise

in small cities. But the basic infrastructure needs of these cities tend to receive low priority.[20/]

22. Restructuring LDC economic incentives is a basic element in an employment-oriented growth strategy. It could not only bring about fundamental change in labor utilization by itself but may well be vital to the success of the above-mentioned measures. Sound donor advice could play a key role in restructuring incentives. These reforms could proceed in two ways. One approach would be to impose taxes on capital goods and/or give subsidies to employment of labor to offset existing distortions. This runs the danger of imposing additional controls and bureaucratic inefficiency on top of an existing set of controls but it would at least encourage a pattern of resource use more in line with resource endowment. The other, and preferable, approach would be to dismantle the existing controls which rigged incentives in the wrong way to begin with.

20/ The most comprehensive study on this topic was done by the Stanford Research Institute, "Costs of Urban Infrastructure for Industry as Related to City Size in Developing Countries," (October 1968). This study of eighteen cities in Northern India found that incremental infrastructure costs declined slightly (7%) from cities of 48,000 population to 132,000, but that from 132,000 to 1,070,000 (largest city in the sample), incremental infrastructure costs did not change. Thus, although marginal costs did not increase in cities above 130,000 population, neither did they decline. The study furthermore identified particular industries which were suited to small and medium size cities owing to the nature of their infrastructure requirements.

The impact of these reforms on employment will occur in many ways. Incentives will be greater to utilize existing capital more fully and to hire more workers rather than expand overtime. With foreign exchange provided by external aid, LDC's will be stimulated to seek imported technology more suitable to their factor proportions. Not only will there be stronger incentives to invest domestically in more labor-intensive techniques within a given enterprise, but, perhaps of greater importance, to invest in industries employing more labor-intensive technologies. These will include not only labor-intensive consumer goods but domestically produced capital goods. Capital goods production is often relatively labor intensive even in developed countries. Also, the adaptation of developed country equipment in LDC's (i.e., the development of intermediate technology) appears to take place largely within LDC capital producing firms. Domestic capital goods production is thus an important instrument of "informal education". Finally, the inter-industry shift in the pattern of investment should result in a more efficient as well as more labor-intensive allocation of capital. Under excess investment demand conditions which typically prevail when capital is subsidized, capital is often allocated among industries by such rationing devices as permits, licenses, and "administrative discretion." This all too often means import or credit privileges are granted on the basis of political considerations. Favored firms tend to be large scale, capital-intensive operations but not always those which would yield the highest return on capital. With the elimination of subsidies, non-price rationing should become largely unnecessary. Capital will be demanded only in uses where its expected return (discounted for risk) exceeds its now higher cost. That is, with the elimination of subsidies, capital should be allocated among industries more efficiently. Thus, the net effect, particularly in the long run, of the increase in the cost of capital will be an increase in output per unit of capital and in employment of labor in the economy as a whole.

23. In addition to the above effects, which would result from any policy change which brought about a more realistic price of capital relative to labor, some effects will be linked to individual policies. A more realistic exchange rate coupled with a less restrictive import regime (moderate tariffs for all categories of goods rather than restrictive administrative controls with special exemptions for capital goods) should increase employment via (1) increasing the use of existing capital by making more intermediate good imports available for production, (2) creating more profitable investment opportunities for domestic capital goods and export production and (3) increasing foreign saving attracted by better national creditworthiness.

More realistic domestic bank interest rates should produce sharp increases in savings invested in productive facilities by inducing domestic savers to switch their savings from hoards of cash or goods to deposits in the banking system. To the extent that higher interest rates increase the level of investment they increase total output as well as output per unit of capital. The time lag before the effects of additional capital and credit availability occur may be much less than the time required for new investment because of the increased supplies of non-inflationary credit that can accompany a significant increase in bank interest rates. Under the usual conditions of excessive demand for bank credit relative to supply in most LDC's, large industry and public sector claimants fare better than small industry and agriculture in obtaining credit. These latter groups therefore have to rely extensively on private or "unorganized" money markets at interest rates several times as high as those of banks. Another effect of increased bank credit availability (and these effects can be substantial in three months or less) should be to increase the avialability of working capital to small and medium-sized businesses, also providing a spurt in production from existing production facilities. Such additional credit could probably also bring about some fairly quick increases in agricultural production if the increased availability of credit (at less than private money lender interest rates) could be channeled to farmers. Fertilizer use in most LDC's, for example, is a fraction of desirable levels partly because of lack of credit at reasonable cost to medium and small scale farmers. Employment and output benefit from the fact that an increased share of credit is going to inherently labor-intensive private medium and small sized businesses and farms as well as from the fact that credit has increased.

The effects of elimination of tax subsidies to capital equipment investment (such as investment tax credits and accelerated depreciation allowances) in LDC's are similar to those from higher interest rates. By making capital equipment more expensive relative to labor, new investment would be encouraged to use more labor-intensive techniques, both by using alternative technologies -- equipment to produce any given product, and to concentrate on products most efficiently produced by labor-intensive means. The elimination of tax subsidies may or may not increase total domestic saving. Presumably the elimination of subsidies would reduce private (business owner and firm) saving by some fraction of the accompanying increase in tax revenues. Government net revenues would probably be increased by about the full amount of the reduction in subsidies. The net investment and growth effects of this would depend on how the government used the additional resources. In countries where luxury consumption among upper income groups is high and lack of government revenue constitutes a major barrier to growth, the effect could be quite advantageous.

24. The phenomenal performance of the Korean economy after the exchange rate and interest rate reforms in the first half of the sixties is perhaps suggestive of the impact which a reform in the incentive structure can have. Recent in-depth analysis of Korean experience has concluded that these reforms were largely responsible for raising the savings rate from a little over four percent of GNP in 1964 to eighteen percent in 1969, stimulating a 12 percent annual GNP growth rate and a boom in labor-intensive exports during the last half of the decade, and bringing open national unemployment down from over eight percent in 1963 to four percent by the close of the decade.[21/]

21/ Gilbert T. Brown, Economic Policy and Development: Korea in the 1960's, a draft AID Research Study, 1970.

Although Korean experience is unique in several ways (it is a medium-sized country heavily dependent on foreign trade, the system of government and government-business relationships have special characteristics), it argues that no country can afford not to consider such reforms seriously as an important part of an employment-oriented development program.

25. There are two main categories of objections to reforms of economic incentives: (1) they will encourage very little if any employment and (2) they will have adverse effects on investment, output, and even employment. A frequently heard argument under the first heading is that possibilities for substituting labor for capital are limited by the available techniques to produce a given product. This substitutability will vary from industry to industry; it will be much greater in agriculture, construction, and in many consumer goods and machinery manufacturing industries than it will be in basic steel refining or petro-chemicals, for example.[22/] In any event this

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22/ Most empirical research on substitutability has been at such an aggregate level that the results are difficult to interpret. It has usually assumed that industrial census data can be viewed as observations along a "production function" relating inputs and output in a given production process. This approach has generally yielded the result that a ten percent increase in the price of capital relative to labor would increase the employment of labor relative to capital from five to ten percent (the "elasticity of substitution" = .5 to 1.0). (See OAS, op. cit. p. 78) One of the few micro-economic studies of substitutability found a high degree of substitutability for 25 of 51 metal-chipping tasks (G.K.Boon, Optimal Technology in Metal-Chipping Machine Tools, Stanford University Institute of Engineering - Economic Systems, 1966).

argument fails to take account of the possible effect of incentive reforms on the composition and level of output by encouraging new investment to take place in those industries most efficient at market prices. It also neglects the stimulus provided to develop or adapt new, more efficient labor-using (or capital-saving) techniques, not hitherto available or considered (as well as the various other positive effects on production, saving, and investment mentioned in paragraphs 22 and 23).

Another argument runs that economic incentive reforms would have little or no impact on employment because final users are alleged to pay a realistic price for capital. It is suggested that the privileged recipients of subsidized foreign exchange and bank credit will be induced to resell or relend for a higher (realistic) price in the unofficial market. Governments are aware, of course, that subsidies encourage black market operations and they take steps to ensure that purchasers of capital at subsidized prices will use it as intended and do not resell it. If resale does occur, this means the recipient of subsidized capital makes a windfall profit which may make him prone to act in less economizing ways. No firm conclusion can be made about the significance of this argument until it receives systematic empirical research.[23/]

26. A second kind of objection is that reforms increasing the cost of capital carry a danger that investment may be adversely affected in the short run, possibly causing an economic-political crisis and/or

23/ See Ronald G. Ridker, op. cit. pp. 31-39, for a lucid discussion of these points. (In Ronald G. Ridker and Harold Lubell, editors, Employment and Unemployment Problems of the Near East and South Asia, Volume I (New Delhi: Vikas Publications, 1971).

suspension of the reforms. Critics who take this view have recommended a gradual implementation of reforms to cushion the shock and maintain investor confidence. However, experience in Korea and other countries suggests that the higher costs of capital will not inhibit investment and growth so long as other policies are not unduly restricting total demand and discouraging domestic saving. It should be made clear to the public that more realistic interest rates and exchange rates are intended to increase saving, investment and exports, not to hinder them. Supporting administrative action to encourage such expansion may be desirable. Because of the interrelationships of economic policies and programs, it is usually desirable that these reforms include several components in a linked package: devaluation, import liberalization, tariff unification, and interest rate reform are probably the key measures, but reduction of distortion in fiscal subsidies (for example, providing a tax holiday on taxable profits rather than investment), and labor payment reforms are also important. Domestic public investment programs with high employment generation but relatively low import and capital requirements, such as labor-intensive irrigation, road, and low-income housing construction, should be complementary to economic policy reforms. They will have not only a direct impact on employment, thus smoothing adjustment to a new relative price structure, but will generate additional demand for labor and local materials-intensive commodities. External assistance in the form of untied program or sector aid can play an important supporting role by providing vital imports during exchange rate-import liberalization reforms until growing export-generated foreign exchange can meet import needs.

This kind of assistance is well-worth providing if it brings the long run benefits of more appropriate LDC economic incentives. These reforms also mean that an economy is "opening" itself to world trade. This implies access to world markets. Simultaneous liberalization moves by many LDC's will, of course, give them access to each other's markets. But, clearly, better access to developed country markets would provide an enormous boost for LDC exports.

27. Protected business interests reap at least short run economic and political benefits from the current anti-employment bias prevailing in many LDC's. Some of these favored interests may be hurt even if reforms are carefully designed and implemented so as to minimize painful short run effects, even though the business community as a whole will benefit. Thus, it will be easier for LDC's and individual donors to continue to agree on external aid on the usual project-by-project basis with the usual test of market profitability rather than on broad policy measures with major social and political ramifications. But the social and political upheavals currently sweeping some developing countries are partly spawned by the tendency of governments to ignore or put off paying attention to how many of their people are sharing in economic progress. Productive employment is the means by which the whole people of a country can contribute to and benefit from economic progress.

APPENDIX

ACTIVITIES BY INTERNATIONAL ORGANIZATIONS IN THE EMPLOYMENT FIELD

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The following summary covers major employment research projects and other activities sponsored by international organizations plus A.I.D. and the U.K. Overseas Development Administration. It does not pretend to be exhaustive. The focus of the summary will be on research initiated within the last two years in response to the new world-wide concern with employment problems.

International Labor Organization (ILO)

The ILO is the pioneer in the field of employment research in several respects. It laid the basis for current work when it shifted its technical assistance emphasis after World War II to the manpower and employment problems of developing nations. In the 1960's it began publishing a series of articles in the International Labor Review and reports in its Studies and Reports Series which anticipated the current surge of concern and research on employment problems. These developments culminated in the late 1960's in the initiation of the ILO's World Employment Program (WEP).

After an international conference in November 1969 on employment research needs, the ILO set up an ambitious WEP research agenda. This was curtailed severely by the current ILO financial crisis, but some studies which have nevertheless been slated for continuation include: employment and technical change in agriculture in Pakistan, rural-urban migration studies, employment in small-scale industry (which may be broadened to embrace employment in the industrial sector), a detailed examination of employment in Iran (this study has just been published as Problems of Employment Creation in Iran), and possibly a major cross-section study of employment in the services sector. The ILO also sponsored a January 1971 international conference in Geneva on "Fiscal Policies for Employment Promotion" and is sponsoring a similar conference in November on "The Concept of Underutilization of Labor." By publicizing the employment problems of developing countries, WEP served to focus the attention of both development practitioners and researchers.

WEP also set in motion a series of major international missions to study employment problems and make policy recommendations in selected countries. The report of the first 25-man international team to Colombia led by Professor Dudley Seers in spring 1970, Towards Full Employment, is now a minor classic. The Ceylon team completed its (yet unpublished) report in summer 1971. A mission is to be sent to Kenya. Additional missions to Peru and Malaysia are under consideration. If these follow the pattern of the Colombia report, heavy emphasis will be placed on the presumed impact of macro-economic policies and such institutions as land tenure, education, and health on employment. Complementing the work of these missions are regional employment teams in Asia (Bangkok) and Latin America (Santiago). A team for Africa is being planned. The WEP country missions will not be affected by the ILO financial crisis since they are funded by UNDP.

OECD

The Development Centre of the OECD has now completed its series of Industrialization and Trade case studies comprising a general study plus case studies on Brazil, India, Mexico, Pakistan, Philippines and Taiwan. These argue that exchange rate, tariff, credit, fiscal, and labor policies pursued by many developing countries have not only led to inefficient output growth but have also discouraged employment growth. Working documents from the 14 study Development Centre employment project initiated in 1969 are now appearing at an increasing rate. The first study, The Employment Problem in Less-Developed Countries: A Review of Evidence, by D. Turnham and I. Jaeger, has gained deserved recognition as a comprehensive summary of available evidence on unemployment and discussion of measurement and conceptual questions. Three other sets of working documents have appeared recently: "Employment and Output - A methodology Applied to Peru and Guatemala" by E. Thorbecke and A. Stoutjesdijk, "Employment and Unemployment in Ceylon" by P. Richards, and "Technological Change in Agriculture and its Effects on Employment" by M. Yudelman, G. Butler, and R. Banerji. By the end of 1971 ten more studies are due for completion. They include studies of the employment effects in Latin America, Asia, and Africa of a range of agricultural policies, technological change, housing, trade unionism and wage levels, tourism, and government fiscal policy. The D.A.C. Chairman's Report for 1971 (DAC(71)33) expresses the hope "that enough new insights [from these studies] will be available by the last quarter of 1971 to justify the initiation in the D.A.C. of discussions as to ways donor policies can help provide more jobs." (p. I-13) Chairman Martin also asserts that "only a massive, coordinated attack can be justified, one which founds the whole development plan on the twin objectives of job creation and economic growth - and often in that order - rather than aiming primarily at a higher G.N.P." (p. I-13)

The World Bank

The IBRD has focused a substantial portion of its research efforts on employment questions by creating a "Division of Population, Employment, and Human Resources" in its Economics Department and by sponsoring studies on employment-related topics in its Basic Research Center and in other units. Topics of these studies include labor force surveys, labor-intensive options in agriculture, irrigation, and road-building, and the relationship between labor markets and educational expansion. These studies may lead to reformulation of Bank lending policies to take employment considerations into account. It is noteworthy that World Bank President McNamara in his Address to the Bank Board of Governors (Washington, September 27, 1971) gave great emphasis to the unemployment problem and concluded that (1) "development policies must explicitly aim at greater employment and greater equality of income distribution" and (2) the World Bank should provide sound policy advice and an "augmented capacity to provide financial support" for programs dealing with these problems.

Organization of American States and Regional Banks

The O.A.S. focused on employment generation at the recent

Inter-American Economic and Social Council Meeting in Panama in September, 1971. A major study, Employment and Growth in the Strategy of Latin American Development: Implications for the Seventies, was prepared by the OAS Department of Economic Affairs for this conference. Recent publications of the Inter-American Development Bank (Raul Prebisch, Change and Development: Latin America's Great Task. N.Y.: Praeger, 1971) and the Asian Development Bank (Southeast Asia's Economy in the 1970's, Manila: 1970) give great emphasis to employment.

U.K. Overseas Development Administration (ODA)

ODA supports the Institute of Development Studies at the University of Sussex which is conducting studies on employment as related to agriculture, education, and regional growth in Africa, South America and India. The Institute sponsored a September 1971 International Conference on "Urban Unemployment in Africa." The ODA directly sponsored a September 1970 international conference at Cambridge University on "Prospects for Employment Opportunities in the 1970's."

A.I.D.

A.I.D. is supporting several employment-related research projects including the Yale University Economic Growth Center project on "Employment and Unemployment in the Developing Countries" which has pioneered university research in this field. The project began in July 1969 and will produce 14 studies on employment problems in selected countries and sectors. Country studies include Brazil, Chile, Colombia, Congo-Kinshasa, Ghana, Kenya, Korea, Pakistan and Taiwan. The general focus will be on macro-economic policies affecting employment although some studies will emphasize special concerns relevant to the country. These include, for example, study of the choice of industrial technology in Brazil and Kenya, the nexus between income distribution, consumption patterns, and unemployment in Pakistan, service sector labor absorption in Chile, and time profiles of characteristics of the unemployed and small-scale agriculture and industry in Colombia. Sector-functional studies include choice of technology, transfer of technology, technical change in agriculture (India), the services sector (Colombia) and education (Chile). The wide range of countries with differing policy experiences and resource endowments, as well as the sector studies, should provide valuable insights into the nature of employment problems and policy options.

Other A.I.D. supported research in the employment field include projects on employment generation in agriculture in West Africa at Michigan State University, the impact of new technology on rural employment and incomes at Cornell University, and the impact of income distribution on growth and employment at Rice University. A.I.D. also sponsored a July 1970 international conference in Kathmandu on "Employment and Unemployment Problems of the Near East and South Asia." (The 28 papers presented at this conference have been published in Ronald G. Ridker and Harold Lubell, editors, Employment and Unemployment Problems of the Near East and South Asia. New Delhi: Vikas Publications, 1971) A.I.D. also helped support a May 1971 "Conference on Manpower Problems in East and Southeast Asia" held in Singapore. Selected papers from this conference will appear in the Autumn 1971 Malayan Economic Review and the full papers and proceedings will be published in 1972. The Singapore Conference has led to the establishment of five international Working Parties to promote research on employment problems in the region.

A.I.D., through its Office of Labor Affairs, has provided technical assistance for establishing institutions designed to improve the functioning of free labor markets in developing countries (e.g., employment services, vocational training programs, labor statistics agencies, etc.) and advice in such areas as manpower planning, labor standards, social security, and labor-management relations. It has also funded and provided technical support since 1961 for the International Manpower Seminars of the Labor Department-administered International Manpower Institute. These bi-annual seminars for public and private sector officials and leaders from developing countries have dealt with a broad range of topics related to problems of manpower planning, employment, and human resource development.