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POLICIES AND MEASURES FOR RURAL EMPLOYMENT IN ASIA

by

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ABSTRACT

Employment and unemployment are key issues in Asia. This paper first examines economic growth and employment generation in Asia and in developing countries. Then policies and measures for rural employment are reviewed, first for agriculture, then for small and medium industries (SMIs). The results show that both agriculture and SMIs suffer from discrimination in government policies which is likely to have a negative impact on employment generation. Several sector specific policies are then reviewed for both sectors. Special SMIs projects are also reviewed. The conclusion is that projects may be useful under special conditions, but their effects on employment may be swamped by the discriminatory effects of general and sector-specific policies.

POLICIES AND MEASURES FOR RURAL EMPLOYMENT IN ASIA

by

Richard L. Meyer[1]

Introduction

Employment and unemployment are issues of great concern in Asia, particularly in the high population density countries. The region has great diversity. On the one hand, it contains the natural resource-scarce densely populated countries of Hong Kong, Japan, Singapore, South Korea, and Taiwan that have achieved high rates of economic growth, have been very successful in employment creation, and have succeeded in increasing the wage rates paid to workers. On the other hand, the region contains countries such as Bangladesh, India, Pakistan, and the Philippines with better natural resource endowments but with lower rates of growth and employment creation. Clearly factors other than natural resources influence a country's success in providing employment and income to its people.

The purpose of this paper is to review some of the factors that influence employment creation in a country. The emphasis is on the rural sector since, at current stages of development and for the foreseeable future in many countries, it is going to have to absorb much of the expansion in work force. Since the performance of the rural financial system was reviewed in detail in a parallel paper (Economics and Sociology Occasional Paper No. 1599), it will not be discussed in this paper.

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The paper is organized in the following way. The next section includes a short discussion about employment performance in developing countries generally and Asian countries specifically. The main part of the paper is then presented in two sections. The first section discusses issues associated with agricultural performance and its impact on employment. Then the next section analyzes industrial performance with particular emphasis on small and medium industries.

Employment Performance in Developing Countries

Before analyzing policies and measures to stimulate rural employment, it is useful to briefly review employment performance generally in developing countries during the past couple of decades. Recent papers by Gregory, and Harris and Rashid provide useful insights. These papers systematically analyze the popular reference to the alleged "failure" of economic development to provide sufficient employment to the rapidly growing labor force resulting in an "explosive" growth of low-quality jobs. The first paper develops the methodology and provides a comparative analysis of several countries for the 1960s and early 1970s. The second paper extends the analysis through the early 1980s. Employment quality is the essential focus, and the conclusions are somewhat crude given the weaknesses in the data used. Nevertheless, these papers provide useful results that improve our understanding of the overall employment problem.

Table 1 presents the four criteria developed by Gregory and used in the two studies to analyze employment trends. A brief statement of the reasoning used in selecting them is also provided. Gregory argued that, since it is universally acknowledged that agriculture has the lowest wages, a transfer of labor out of agriculture to other

sectors would be interpreted as a improvement in average employment situation and living standards of the employed population. Likewise, an explosive growth in sales and service jobs would indicate a decline in labor quality relative to workers in other activities. Unpaid family workers and the self-employed are also seen as employments of last resort, so a rise in employment in these categories could be interpreted as a decline in employment quality. Finally, if the quality of job opportunities deteriorates, the number of jobs in the categories for which job seekers are willing to wait should also decline so the open unemployment rate should rise.

Harris and Rashid were not able to repeat the exact same analysis for the same countries included in Gregory's earlier work so direct comparisons can not always be made between the employment performance of the 1960s and 1970s. Tables 2, 3 and 4 report the common data for the two studies while Table 5 reports real wage rate data reported only in the latter study. These Tables present data only for the Asian countries included in the studies.

The authors are careful to point out the weaknesses of the analysis but the general conclusions are interesting in that they tend to reject the pessimistic interpretation about the employment situation and trends in developing countries during these two decades. Gregory arrives at the following conclusions about developing countries in the 1960s:

1. The rate of secondary sector employment expansion was several times that of the primary (agricultural) sector. Generally the average rates of growth of employment in the tertiary sector were slightly lower than secondary sector growth rates. These results seem to refute the frequent argument that an explosive growth was occuring in the tertiary sector because of limited employment growth

in the primary and secondary sectors. Furthermore, the highest tertiary sector employment growth rates occured in the higher income countries where high income service jobs are important components of the tertiary sector.

2. The fastest growing occupational groups were the white collar group, followed by the production category including craftsmen and laborers. Employment in the sales and services categories generally do not show an explosive increase relative to other presumably preferred jobs. Likewise, there do not appear to be a rapid expansion in the jobs classified as self-employed or unpaid family workers, categories often viewed as employment of last resort.

3. Data on unemployment suggested a downward trend in ten out of 14 countries, rather than an upward trend which would be expected if employment quality was declining.

Harris and Rashid also came to a reasonably positive interpretation of their results for the 1970s, and in their comparison of the 1970s with the 1960s. Improvements were noted in sectoral and occupation distribution of labor, and in employment status. The issue of real wage trend was indeterminant, but unemployment seemed to be worsening. Thus they concluded that employment conditions for employed persons improved during the 1970s, but the numbers of unemployed also rose. This was interpreted as a negative sign for the increasing numbers of persons entering the labor force from the larger population size, from agriculture, and through the school system.

Although these research findings succeeded in casting some doubts about the frequent allegation of poor employment growth in developing countries during the 1960s and 1970s, it is important to note key intercountry differences, and to determine how the

economic performance of the Asian countries during the 1980s may have influenced employment generation during this decade. Even the fragmentary data reported in Tables 2-5 confirm that there are wide differences among Asian countries in economic performance and employment trends.

The favorable situation in Asia of the Newly Industrialized Countries (NICs) of Hong Kong, Korea, Singapore and Taiwan is reflected in the data by a decline or slow growth in agricultural employment, in relatively high rates of employment growth in the secondary sector and in the preferred white collar and production occupational groups, in low and/or declining unemployment rates and open unemployment numbers, and in rapid increases in real wages. Malaysia, the Philippines and Thailand in the middle income group of countries also performed fairly well in most of these criteria, except for the negative wage rate situation in the Philippines. The low income countries present the most problematic situation. Growth in the tertiary sector and in the less preferred occupational groups appears to be relatively more predominant than in the higher income countries. The low income countries also tend to report large increases in open unemployment and downward trends in real wages. Pakistan has been an exception because of large numbers of overseas workers.

Economic trends during the 1980s are likely to have had a differential impact on employment generation in the region. The NIC economies averaged a 9.2 percent annual growth rate in GDP during the 1971-80 period.[2] Average growth rates for the decade of the 1980s, however, are likely to be somewhat lower because of economic slowdowns

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[2] The data in this section were taken from the Asian Development Outlook 1989, Asian Development Bank, Manila, 1989.

in 1982 and 1985, and projected modest growth for 1989 and 1990. Since these countries have essentially reached full employment, any slowdown in economic growth is likely to translate into a slowing of improvements in real wages and some occasional unemployment rather than serious problems of employment generation. Furthermore, these countries are projected to have only a bit over 1 percent annual growth rate in population aged 15 - 64 between 1985 - 2010.

The Southeast Asian countries[3] had a 7.4 percent average annual GDP growth rate in 1971-80, but growth during the 1980s may average closer to 5 percent. Malaysia and Thailand performed better than other countries in this group, and they are likely to experience some tightness in labor supplies leading to rising wages. Some employment and low income problems will continue in their rural areas. Indonesia and the Philippines represent large countries with slow growth and employment problems. The Philippines suffered a recession during 1984 and 1985 so growth rates during the 1980s may only average about 2 percent. Malaysia, Thailand, Indonesia and the Philippines are all projected to have an average annual growth rate of 2-2.5 percent in population aged 15-64 from 1985 - 2010. The latter two countries will have serious problems of employment generation unless they can substantially improve economic growth.

South Asia is the one area in the region expected to have relatively better economic growth in the 1980s compared to the 1970s. The average GDP growth rate in the 1970s was 3.7 percent compared to something over 5 percent expected in the

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[3] The ADB report defines Southeast Asia to include Indonesia, Lao People's Democratic Republic, Malaysia, the Philippines, Thailand, and the Socialist Republic of Viet Nam. South Asia includes Bangladesh, Burma, India, Nepal, Pakistan and Sri Lanka.

1980s. Bangladesh, Burma and Sri Lanka will have the lowest growth rates, while India and Pakistan will have the highest. Only India and Sri Lanka are predicted to have annual growth rates in population aged 15-64 of less than 2 percent for the 1985-2010 period. Most of the other countries will have annual population growth rates of 2.5-3.0 percent for this age category. Therefore, as a group these countries can be expected to have serious difficulty in generating employment for their expanding labor force. India, Bangladesh and Pakistan will face the greatest challenge in sheer numbers: a 285, 57 and 53 million increase in population, respectively, in persons aged 15-64 during the 1985-2010 period.

Policies and Measures for Rural Employment

The analysis presented in the previous section suggested that in general employment performance during the 1960s and 1970s for developing countries as a group was better than commonly believed. The situation for low income countries in Asia, as well as for some of the middle income countries, has been less favorable, however, and economic growth during the 1980s does not appear to have been rapid enough to substantially improve that situation.

The nature of the general development strategy pursued by a country will likely be the single most important factor affecting employment generation over the long term. Generally those economies which have pursued outward-looking, labor-intensive development strategies have been most effective in expanding employment. The NICs in Asia offer the best example of this strategy. Sector-specific policies for agriculture and small and medium industries can complement or partially compensate for a development

strategy that does not favor rapid employment growth. Moreover, these policies will influence the extent to which the rural areas participate in and benefit from the growth and employment generation that occurs. These policies also are important in determining the distribution of benefits within rural areas.

This section of the paper analyzes several current views about sector-specific policies to enhance the generation of rural employment and income. For purposes of presentation, policies with the greatest impact on agriculture are discussed first, followed by those affecting industry. Policies affecting both of these subsectors have great importance for rural people because of the heterogeneous nature of rural households, and their multiple sources of income and employment.

Agriculture

Frequently, the economic policies employed in developing countries have tended to discriminate against agriculture. The reasons are many. Some countries explicitly choose to tax agriculture to gain resources for industrial development. Some are concerned about keeping food prices low so urban wage rates can be kept low. Others simply don't see much growth potential in agriculture relative to industry because of the relatively low income elasticity of demand for food at higher income levels. Still others want to have tight control over foreign exchange earnings so they set up parastatals to handle export commodities but these usually end up taxing agriculture heavily. As partial compensation to farmers for these discriminatory actions, governments often provide subsidies for production inputs and credit. But such subsidies may not significantly alter the unfavorable economic incentives caused by government intervention, as David noted

in her study of Philippine agriculture. Furthermore, interest rate subsidies worsen income distribution because only a few, typically well-off farmers, receive the subsidized loans.

An important multicountry study was recently conducted to measure the effect of sector-specific (direct) and economywide (indirect) policies on agricultural incentives (Krueger, Schiff and Valdes). Ali summarized the results for Asia and discussed strategies for policy reform. A total of ten crops and countries were analyzed as shown in Table 6. The impact of direct pricing policies for the two time periods studied is given in columns 2 and 5. These figures provide an estimate of the difference between the prices domestic producers receive and the prices that would have prevailed without sector-specific distortions. Colums 3 and 6 give estimates of the percentage differences between domestic producer prices and those that would have prevailed with an equilibrium free trade exchange rate and no trade distortions in the tradeable non-agricultural sector.

Several important conclusions emerge from these data. All countries in both periods directly taxed export products. In seven out of the ten cases, the levels of indirect interventions (real exchange rate and protection policies on nonagricultural commodities) on producer incentives was greater than the direct inverventions. These results show that the discrimination against exports implicit in macroeconomic policies had a larger impact on agricultural incentives than the policies targeted directly at agriculture. Direct government interventions for imported products were generally positive in both periods except for wheat in Pakistan. Indirect intervention, however, was

negative in all cases so that the total effects of intervention were negative except for rice in Malaysia and Korea.[4]

Two implications follow from these results. First, policy reform to stimulate agricultural output for those products for which there is negative protection or penalization will require changes in policies that affect these products both directly and indirectly. Second, the penalization of agriculture in the magnitudes discovered cannot help but have a negative effect on production and on the amount of labor used directly in production and indirectly through the backward and forward linkages between agricultural production and the rest of the economy. The nature, scope, timing and sequencing of needed reforms is beyond the scope of this paper. Suffice to say that specific policies and programs to stimulate employment in agricultural production may be swamped by large and systematic discrimination against producers through direct and indirect governmental policy intervention.

Government policy towards agricultural technology and technological change represent a second type of government intervention with important implications for rural employment. There is a great deal of debate over the impact of the high yielding wheat and rice varieties (HYVs) on production, use of labor, distribution of benefits and ecological effects on the environment. The issues include whether or not the technologies are scale-neutral, whether total employment rises or falls with adoption, and whether certain classes of rural people have benefitted more than others. These issues are complex and there is not a clear concensus on some of them.

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[4] Mishra analyzed data for wheat and rice in India and rejected the allegation that India has kept agriculture underpriced.

One of the early studies of employment and technological choice was conducted by Bartsch. He analyzed detailed crop and farm budgets with particular emphasis on rice and wheat in India and Pakistan. He concluded that a shift from traditional to HYV technology leads to increased employment per unit of cropped area, while a change from intermediate to mechanized techniques reduces employment. When both changes occured simultaneously, the evidence seemed to indicate reduced labor. When employment was measured per unit of output, then both biological and mechanical technologies reduced labor input. Little empirical data were presented on employment changes due to the forward and backward linkages that exist between the different levels of technology and other sectors.

The experience of rice production in the Philippines is useful to review because of the large amount of farm level data that have been collected and analyzed through the International Rice Research Institute (IRRI). Herdt analyzed village level data collected from 1966 to 1982 in an attempt to discover some of the key impacts of the new rice technology. He concluded: a) production of rice per hectare increased 92 percent over the period, b) labor used per hectare increased about 18 percent, c) double cropping increased from 19 to 59 percent of the land in one study area and 68 to 88 percent in another area, d) there was not an increase in the number of large farmers, e) there was no effect of farm size on adoption, f) biological technologies were generally more widely adopted than mechanical ones, and g) farm operators and hired laborers retain some of the benefits of technological change, but consumers received the largest benefits through lower rice prices.

Jayasuriya and Shand made extensive use of the data from the Philippines and other Asian countries to assess the trends in various aspects of employment. They divided the HYV adoption experience for rice and wheat into two phases. The first or labor using phase showed that in most locations the initial decade of adoption led to increases in labor use. A second phase in the Green Revolution is associated with significant reductions in labor use in recent years. This decline is associated with the adoption of herbicides, mechanical threshing, and direct rice seeding to replace transplanting. New IRRI innovations such as a new small mechanical reaper, a rice transplanter, and minimum tillage systems point the way to future labor savings. The reason for these changes was attributed to rising wage rates in some countries, farmer perceptions of high organizational and enforcement costs associated with hiring labor, and the capital bias of policies in many countries which distorted technological choices in favor of mechanical technology before factor price changes warranted it. Moreover, countries can more easily borrow mechanical technology than biological technology because the latter usually require more testing and adaptation to local environments.

The structure of employment and labor relations change with technological change and rapid agricultural growth as documented in ILO/ARTEP studies emphasizing hired labor markets in Bangladesh, Pakistan, Philippines and Thailand (Hirashima and Muqtada). Comparing high agricultural growth areas to low growth areas, the authors found more hired labor and tenant farmers, a greater demand for labor, higher wage rates, longer periods of employment, and higher income levels. In locations near to industrial or commercial areas, the demand for hired labor in agricultural and non-agriculture was very high, wage rates were higher and duration of employment was

longer. The authors noted that growth and improvement in crop production are crucial factors for increasing demand for hired labor, and that the most important means to achieve this end is irrigation. They also noted the explicit link between agricultural and nonagricultural development through the labor market, and the importance of small and medium industries in providing employment consistent with the education and skills of hired laborers.

Since adoption of HYVs has already reached high levels in many of the more favorable agricultural regions in Asia, attention has been directed at diversification of farm enterprises as a means to stimulate further increases in farm employment and income. A series of studies on rural diversification were reported in India.[5] The studies analyzed livestock (especially dairying), vegetables, forestry and fishing. State level data showed a marginal decline in the share of crop production (falling from 86 to 82 percent) in aggregate output during the 1970s. These trends were predicted to continue with animal husbandry and poultry representing almost 30 percent by the year 2000 (Haque). The patterns associated with diversification are not very clear. One village level study found that larger, wealthier farms were less diversified, while nearness to market and the availability of year-round irrigation were related to greater diversity in enterprises. Surprisingly the number of family members, which would represent the supply of labor to undertake more diversified enterprises, was not significant (Gupta and Tewari). No systematic analysis of the labor impact was conducted for India. But the loan portfolio of the Grameen Bank in Bangladesh which serves landless or near-landless

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[5] The Indian Journal of Agricultural Economics, Vol. XL, No. 3, July-September, 1985, carries several articles and abstracts on diversification in that country.

rural people is heavily weighted towards loans for livestock, poultry and fisheries, especially for female borrowers (Hossain). Therefore the employment effect of diversification may occur in two ways. The first would be through the greater use of hired labor on large farms that specialize in non-crop enterprises. The second would be through a greater utilization of family labor and higher incomes for poor households with little land that add noncrop enterprises to their cropping operations. Part of the explanation for higher levels of diversification on small farms in probably due to demands for subsistence consumption, the use of marginal resources to earn extra income, and risk aversion.

The impact on employment of mechanical and other labor-saving technologies present a more complicated case to analyse. These technologies become important when countries begin to experience rising wage rates associated with increased nonagricultural demand for labor. A problem develops, however, when herbicides and agricultural machinery become available prematurely in the development process, because of their availability in other countries, and profit oriented farmers employ them to substitute for labor. Wickramasekara noted that one of the reasons that Asian countries have not followed as labor intensive a rice growing strategy as experienced historically by the East Asian countries is that the "late-comer" countries had a wider choice of technological options. Government controls and restrictions on these labor-saving technologies may be appropriate when their only benefit is to substitute for labor (Booth and Sundrum). The difficulty is that these technologies have multiple impacts, some positive and some negative, and it is difficult to fine tune policies in order to capitalize on the benefits and avoid the losses. For example, mechanized tillage may not improve yields and may

reduce the labor needed in seedbed preparation, but speedy tillage may be necessary for increased cropping intensity which raises labor demand. Furthermore, an engine which reduces labor demand when used to power a tiller for land preparation may increase labor demand when used to power an irrigation pump which is necessary to increase cropping intensity and crop diversification.

There is an argument that research institutions have concentrated on favorable regions and must now direct more attention to the less favorable geographic regions bypassed by the current HYVs which perform best in the regions where irrigation and input and product markets are well developed. New possibilities for research using biotechnology may help adapt the biological technologies to these less favored regions. Furthermore, biotechnology may help create productivity breakthroughs for products typically produced in the less favorable regions.

Government policy with respect to access to land is the third set of policy measures which have rural employment implications. Access to land is important because it provides access to many of the benefits that accrue from the new technology, and is an important determinant of access to credit from formal financial institutions.

One of the general conclusions of many studies is that there is a negative relation between size of farm and labor input per hectare or, more specifically, declining family labor input measured in worker-hours or worker-days as holding size increases (Booth and Sundurm). There are several alternative explanations for this observation: smaller holdings have better quality land and irrigation, more intensive cropping patterns, value family labor "cheaply," survival, and declining productivity of labor and rising supervision costs as additional hired labor is used. There is also some, albeit less conclusive, data

showing an inverse relation betwen productivity and size of holding. These results suggest that land redistribution in favor of smaller, more equal size farms will produce desirable changes in increased employment, improved land productivity, and greater investment in land improvements. Furthermore, a recent study in Thailand argued that improved security of land tenure would be desirable because of the favorable impact on investment in land and access to institutional credit associated with secure land titles (Feder, Onchan, Chalamwong, and Hongladarom).

A region as large and heterogeneous as Asia implies that different approaches to agrarian reform may be appropriate depending on the nature of the specific agricultural system. Booth and Sundrum noted three general types of land reform: the Japanese and Taiwanese types of abolishing tenancy by transferring title from owners to tenants, the redistribution of land from large to small farmers, and the redistribution of land not only to existing small farmers but also to landless laborers.[6] The consequences of the failure to implement reform will depend on the way that social and institutional relations evolve as growing population pressure on limited land resources outpaces land-saving technological development and irrigation development (Hayami and Kikuchi). Polarization of peasant communities into larger commercial farmers and landless proletariat could lead to impersonal market relations with a breakdown in traditional moral principles such as mutual help and income sharing. On the other hand, peasant stratification ranging from landless laborers to non-cultivating landlords in which all community members have claims to the output of land would lead to quite different consequences for land productivity, employment generation and income distribution.

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[6] The Philippine case could be added as a fourth type where permanent leasehold contracts were created to replace share tenancy.

The difficulty with land reform policy is precisely the difficulty of designing and implementing the appropriate policy. Land reform regulations such as rent control or planned land confiscation and redistribution can result in landlords subdividing their land among family members and evicting tenants so they can engage in direct cultivation using hired labor. Laws preventing sub-tenancy arrangements can induce large tenants to cultivate land themselves rather than sub-rent it to landless laborers in small plots. Land taxation as an alternative reform can be frustrated by the same large farmer interests that fill agrarian reform legislation full of loopholes. Any agrarian reform legislation proposed to increase employment and/or income must be based on an understanding of the dynamic forces at work in each country rather than simply adopting a model used elsewhere in another country. Agrarian reform may increase employment, but the problem is how to successfully implement it when it conflicts with vested interests.[7]

Although apart from irrigation there are few quantitative studies of impact, the most unequivocal area of government policy in support of agricultural employment concerns infrastructure development. The literature on Asian agriculture is clear in identifying irrigation development as a major source of improvement in agricultural growth and the increase in employment derived from it. One study conducted in the Philippines traced the positive impact of irrigation development on nonfarm employment in a neighboring town and city (Sander). An increase in density of roads and transport

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[7] The Philippines land reform process is instructive. When martial law was in effect in the 1970s, considerable progress was made in reducing large rice and corn holdings and giving security of tenure to share tenants through the creation of leaseholders. The unresolved legal situation on many plots more than ten years after the reform was initiated and the difficulties in arriving at a concensus in the recent Comprehensive Agrarian Reform Program (CARP) reflect the problem of implementing reforms which are in conflict with landed interests.

facilities was shown to make a positive impact on location of rural bank branches and a reduction in client transaction costs with banks in Bangladesh (Khalily et al.). Better transportation and communication systems are expected to accelerate agricultural growth and, therefore, expand employment. The issue then for infrastructure policy is not whether or not to expand investment, but what infrastructure to develop, where, in what order of sequencing, and how to finance the large investment and maintenance costs.

Small and Medium Industries

This section of the paper deals with the issue of promoting small and medium industries (SMIs) as a means to increase rural employment. This seems to be a logical policy because many small firms are located in rural areas and provide a large amount of full-time and part-time employment to rural households (as noted in several papers in this symposium). The following discussion emphasizes the issues that are associated with this approach. Space does not permit an assessment of the arguments about industrialization generally as an engine of growth. As in the previous section on agriculture, this section begins with a discussion of the general policy bias against small and medium firms, followed by a discussion of specific policies and programs. Although there are several disagreements about the desirability of stimulating small scale industrialization, there is some agreement on the essential factors that affect the performance of this subsector and the outcome of specific policies to stimulate it.

One of the most important ways to stimulate SMIs is through policies to accelerate agricultural growth because of the strong backward and forward linkages that exist between agriculture and rural industries (Hiemenz and Bruch; Ho; Islam; Kilby and Liedholm; Liedholm and Mead). Entrepreneurs frequently lament a lack of effective

demand for their products. This can be traced in many cases to rural poverty. As incomes rise, there is a rapid increase in demand for food and non-food items produced by local firms and industries to meet local tastes and preferences. Many countries have engaged in discriminatory policies against agriculture (as discussed in the previous section). Since SMIs have stronger linkages with agriculture than large scale firms, they suffer more from weak demand caused by this discrimination against agriculture.

Another systematic way to assist SMIs is through reducing the policy bias that often exists in favor of urban-based, large scale firms. Some research has tried to systematically quantify the magnitude of policy-induced distortions in factor and output markets through trade policy, monetary policy, fiscal policy, labor policies, output prices, and direct regulatory controls (Haggblade, Liedholm and Mead). Table 7 gives an indication of the possible magnitude of factor price distortions by relating the costs of large firms relative to small firms. Labor and tax laws tend to favor small size firms, while trade and interest rate policies favor large firms. Overall the labor market, trade regime, and domestic capital market factors tend to induce higher labor costs and lower capital costs for larger enterprises compared to smaller ones, thereby contributing to higher capital/labor ratios for larger firms. Thus factor market distortions can be expected to discourage greater labor use in industries.

Product market distortions are influenced in large part by a country's trade policies. The import substitution industrialization strategies pursued in many Asian countries beginning in the 1960s typically included high levels of effective protection for a number of industries, quantitative controls on imports, and overvalued exchange rates. Countries that followed export promotion strategies, including Hong Kong, Singapore,

South Korea, and Taiwan, had minimal or zero levels of protection, few quantitative import restrictions, equilibrium exchange rates, and some export subsidization. Although the evidence is sparce, Haggblade et al., cite studies in Indonesia, Malaysia and the Philippines that showed that import tariffs were biased against SMIs. On the other hand, large scale Korean firms appeared to have benefitted more from export incentives than did their Taiwanese counterparts. This is speculated to be one of the reasons why large firms played a major role in Korea's export boom.

When ASEAN countries decided to reorient industrial policies at the end of the 1960s as the early phase of import substitution ended, instead of removing trade barriers the existing incentive structure was augmented by selective measures to promote industrial investments and exports. These measures included a reduction of or exemptions from duties and surtaxes on imported inputs, import duty drawbacks for exporters, tax incentives, and concessional export credit. SMIs are not generally benefitted by these incentives, because either they are explicitly excluded or they find the transaction costs of the administrative and bureaucratic requirements and procedures too high. Hiemenz and Bruch cite several specific examples from Indonesia, Malaysia, the Philippines, Singapore and Thailand which demonstrate how the application of these measures is biased in favor of large scale firms. Liedholm and Mead also note that large manufactures are able to get exemptions not available to small firms from duties on imported raw materials. Likewise the tariff structures may charge higher rates on imputs imported by small firms than large firms, such as textile machinery imported in Sierra Leone at a zero tariff rate while small tailors pay a high duty on simple sewing machines.

The net effect of this entire package of policy distortions on employment is uncertain. According to Haggblade, et al., policies which decrease aggregate output, discriminate against agriculture and exports, and bias capital in favor of large firms lead to reduced employment. On the other hand, there is less clear evidence on the impact of factor pricing on labor used by small firms and the effect of policy on the size distribution of firms. Therefore although it appears that the net effect of these policies lead to reduced employment, that conclusion is speculative at this stage of analysis.

India is one of the countries cited for its substantial efforts to assist SMIs by a variety of policies so its experience may be indicative of what might be expected in such a regime. A recent study concludes that India has greatly increased direct employment in traditional processes in industries such as handlooms and soap (Little, Mazumdar, and Page). But when the indirect effects are accounted for, it is more doubtful that the demand for labor has in fact increased. The discouragement of clothing exports in the textile industry is given as an example. Moreover, the policy of reserving some products for small scale firms is questioned because of how it reduces competition, discourages firm growth, and inhibits exports.

A measure proposed to stimulate SMIs as well as agriculture is well developed rural infrastructure (Ho; Kilby and Liedholm). Rural roads facilitate the movement of raw materials to factories in rural towns and of final products to central markets, enlarge the size of rural markets, reduce transportation time and costs of worker travel to off-farm work thereby increasing the size of the labor market, and improve rural household access to education, training, and health and social services. Rural electrification contributes to the productive capacity of SMIs, may reduce operating costs and may

provide them with access to new opportunities and production techniques. Improved communication systems help facilitate the linkage of local firms with larger industries through sub-contracting.

There are, of course, potentially negative rural employment consequences associated with improvements in physical infrastructure. Opening up rural areas through better roads and means of communication may expose rurally-produced goods to more competition from urban products, and encourage rural residents to shift their consumption preferences. Rural electricification may have a negative effect on employment if firms select more capital-intensive production techniques and don't increase employment through firm expansion (Islam).

Industrial estates are sometimes viewed as a cost-effective way of providing infrastructure services to SMIs that would find it too costly to bear the high fixed costs of providing these services for themselves. There are two reasons for believing that industrial estates do not offer much of a solution to SMI problems. The first is simply that SMIs are not significant as a location for SMIs in Asian countries (Hiemenz and Bruch). The second concerns the performance of the estates themselves. Many estates have not lived up to expectations, have been poorly located, and have frequently been shuned by SMIs.

India has used several projects and programs including industrial estates to affect the regional distribution of industries. Included are measures to benefit village and cottage industries, and modern small scale enterprises. They are designed to stimulate the traditional or small enterprises which are generally more equally distributed over space and by encouraging industries to locate in rural and backward areas. The con-

centration of industries in the country sudsided from the 1960s to the 1970s, and there are reasons to speculate that some of these policies were instrumental in this change. There are reasons to doubt the overall efficiency and equity aspects of these policies however (Sekhar). The most efficient method to affect location may be through selective investment in infrastructure where gaps and constraints are identified and eliminated, rather than through direct industrial location policies which may lead to large efficiency losses if their inefficiencies are not detected. Furthermore, controls cannot induce industrialists to invest in unviable areas. If licensing is actively used for locational purposes, the result may be a decrease in investment in the restricted areas without a compensating increase in the target areas. This investment loss will be translated into a loss in production and employment.

Export processing zones (EPZs) were utilized by Tawian and Korea in the early 1960s and early 1970s and subsequently expanded throughout the region. In 1986, 95 EPZs were reported in Asia and the Pacific with 14 more under construction and 10 more planned (Kreye et al.). EPZs are special enclaves set up outside a nation's normal customs barriers. The firms in the EPZs are mostly foreign and enjoy favored treatment with respect to intermediate goods, taxation and infrastructure. Detailed benefit cost studies of EPZs in Indonesia, Korea, Malaysia and the Philippines raise doubts about their net benefits (Warr).[8] Furthermore, there is much debate about their employment impact. The largest share of employees are women working in labor-intensive light manufacturing processes such as electronics assembly, garment production, assembly of

[8] A recent APO Symposium report gives a more positive interpretation to the performance of export processing zones and science parks in Asia.

light electrical goods, etc. Wages are normally equal to, or slightly above, wages in comparable employment outside the EPZ. There is little evidence to document the value of any skills acquired in such employment (Currie; Warr). Since many employees are young with little previous factory experience, it is probable that many of them come from rural areas and remit part of their earnings to the rural household. However, since EPZs concentrate employment in specific geographic areas, there are fewer opportunities for members of rural households to commute to this type of employment compared to the early Japanese and Tawianese experience where the dispersion of small scale industries contributed to high levels of off-farm earnings (Ho). The benefits of EPZs, therefore, appear to be more heavily weighted to foreign exchange earnings than rural employment.

The final group of measures frequently proposed to stimulate SMIs are special financial and nonfinancial assistance projects. Muqtada identified a number of successful special rural employment programs and several challenges such programs face. As noted in the parallel paper, there are reasons to doubt the effectiveness of many projects, especially those targeted for microenterprises. Liedholm and Mead present four lessons from their review of nonfinancial assistance projects for SMIs. First, successful projects have uncovered a single "missing ingredient" need for the assisted firms. Examples include an improved market outlet for Indonesian carvers, the substitution of cotton for wool in the Malagasy Republic carpet industry, and an improved leather tanning technology in Afghanistan. Second, successful projects tailored their assistance to a particular product group rather than to a general and disparate group of small firms. Third, before successful projects were launched, surveys were taken to uncover the effective demand

for assistance and to identify the number and type of "missing ingredients." Four, successful projects tended to be built on existing government institutions, or trade and industry associations. Generally, however, there is great scepticism about such projects; they tend to reach a fairly small number of clients so their net benefits are questionable. They have little hope of expanding to make a significant impact on SMIs.

Conclusions

This paper reviewed several aspects of the recent literature related to rural employment. Policies focusing both on agriculture and small and medium industries (SMIs) were studied. An important common pattern emerged: both agriculture and SMIs have experienced discrimation in several Asian countries because of government policies biased towards large scale industries and urban areas. Although difficult to quantitatively estimate, it appears that this bias has discouraged rather than encouraged rural employment. It is not coincidental that it is the NICs that have experienced the most rapid growth and employment generation in Asia. Their experience may not be directly replicable in other Asian countries, but it is instructive to note how their development strategy has had a positive impact on employment.

The policy conclusions that result from this review are straightforward. The most important thing that countries can do if they are seriously interested in stimulating rural employment is to remove the policy distortions that create the current economic bias against agriculture and SMIs. Second, broad sector-wide programs such as agricultural research, irrigation, transportation, education and communication play an important supportive role for farm and nonfarm firms operating in rural areas. Third, selective

support and assistance programs, especially for SMIs, have not been very useful unless they are carefully targeted to specific problems. Even in these special cases, the benefits of these activities may be small compared to the costs imposed on this sector by the more pervasive and systematic discrimination it suffers.

Past criticisms of economic growth for failing to generate sufficient employment do not seem justified. Rather, it is the nature of the growth process undertaken in individual countries and the policies utilized to support it that influence the speed of employment creation. The NICs in Asia have shown that an outward-looking labor-intensive growth strategy contributes to rapid growth with high employment. The challenge for other countries in Asia is to adopt those aspects of NIC experience that are relevant for their situation.

Table 1

Summary of Gregory's Criteria and Reasoning

Criteria	Reasoning
1. Sectoral distribution of employment	A transfer of labor from agriculture to non-agricultural occupations indicates an improvement in the average employment situation and living standards.
2. Occupational distribution of employment	'Explosive' growth in sales and services occupations indicates increased numbers employed in low-productivity/low-income jobs.
3. Employment status of employed labor force	Rapid growth in unpaid family workers or the self-employed indicates a deterioration in employment conditions.
4. Unemployment rate	Increasing unemployment rates indicates deteriorating labor force conditions.

Source: Harris and Rashid.

Table 2
Rates of Change in Total Labor Force and in Labor Force by Sector of Employment

Category and Country	Years	Total	Sector		
			Primary	Secondary	Tertiary
Low Income Countries					
Bangladesh	1975-81	6.6	3.3	6.7	7.4
India	1975-82	2.6	1.8	2.6	2.6
Indonesia	1961-71	1.5	0.6	3.8	4.5
Pakistan	1951-72	2.7	2.5	3.8	3.1
	1972-82	3.6	2.5	2.6	3.6
Sri Lanka	1963-71	3.3	1.1	1.9	1.2
	1973-80	0.3	- 0.8	a	5.6
Middle Income Countries					
Korea	1960-70	3.2	1.0	11.1	5.1
	1971-80	3.3	-0.5	7.4	5.5
Malaysia	1957-70	2.3	0.7	2.6	2.9
	1970-80	3.4	0.7	4.0	4.7
Philippines	1965-75	3.5	2.7	3.9	4.9
	1971-78	4.1	4.4	3.2	4.2
Singapore	1957-70	3.2	-4.5	4.8	1.8
	1973-80	4.3	-4.2	5.5	3.6
Thailand	1960-70	2.0	1.1	3.7	9.1
	1972-80	4.3	4.0	4.5	5.2
Taiwan	1950-71	2.6	0.3	5.0	4.4
39 Countries (weighted mean)	1960s	2.5	1.1	4.3	4.3
44 Countries (weighted mean)	1970s	3.8	2.0	3.9	4.8
39 Countries (unweighted mean)	1960s	2.6	1.0	4.0	3.9
44 Countries (unweighted mean)	1970s	4.2	2.3	5.2	5.6

[a] Not reported

Source: Data reported for the 1960s were obtained from Gregory. Data for the 1970s were obtained from Harris and Rashid.

Table 3
Annual Rates of Growth in Employment by Occupational Group

Category and Country	Years	White Collar	Sales	Services	Production	Agri-culture	Not Classified	Total
Low Income								
Sri Lanka	1963-71	3.1	3.1	-3.4	2.9	1.0	11.9	3.3
Indonesia	1971-80	0.5	5.6	4.3	8.4	2.1	a	3.2
Pakistan	1972-83	6.8	2.0	5.8	5.2	2.6	a	3.6
Middle Income								
Hong Kong	1971-76	5.7	5.3	3.7	3.5	-4.4	-8.1	3.4
Korea	1960-70	8.4	5.7	6.4	8.8	1.0	-3.0	3.2
	1970-80	6.6	4.1	2.8	5.0	-0.8	-39.9	4.2
Malaysia	1957-70	4.9	2.0	3.3	2.4	0.7	23.6	2.3
	1970-80	7.9	4.2	3.9	6.2	-0.5	7.1	3.3
Philippines	1965-75	3.4	7.3	4.6	3.8	2.7	-5.3	3.5
	1974-81	6.7	5.1	9.1	0.6	1.1	-28.5	2.5
Singapore	1957-70	4.9	1.6	1.6	2.4	-2.4	30.8	3.2
	1976-82	6.0	2.3	5.4	6.4	-6.8	1.1	4.3
Thailand	1960-70	7.4	1.3	5.6	3.5	1.5	-11.0	2.0
	1973-80	8.2	3.5	4.1	26.7	3.7	a	6.1
20 Countries (mean)[b]	1960s	5.4	3.1	3.3	3.4	1.0	1.1	2.7
20 Countries (median)[b]	1970s	6.6	4.1	3.3	4.0	-0.9	-3.5	3.3

[a] Not reported.
[b] These are not the same 20 countries.
Source: Gregory, and Harris and Rashid.

Table 4
Open Unemployed and Unemployment Rates

Category and Country	Years	Average Unemployment Rate	Unemployment Rate Start of Period	Unemployment Rate End of Period	Annual Percentage Change in Open Unemployment Numbers
Low Income					
Burma	1970-82				19.6
India	1970-82				14.3
Indonesia	1973-82				17.8
Pakistan	1971-82				-1.7
Sri Lanka	1970-75				6.5
Middle Income					
Hong Kong	1975-82		9.1	3.8	-8.6
Korea	1962-75	5.9			
	1970-82		4.5	4.4	3.1
Malaysia	1974-80		7.4	5.7	-1.2
Philippines	1960-75	6.4			
	1970-82		4.8	5.3	3.6
Thailand	1972-80		a	0.8	11.0
Taiwan	1964-72	2.4			

[a] Not reported
Source: Gregory, and Harris and Rashid.

Table 5
Percent Change in Real Wages

Category and Country	Years	Agricultural Activities	Nonagricultural Activities
Low Income			
Bangladesh	1973-81	-9.0	a
Burma	1973-81	-28.6	a
India	1973-82	6.5	a
Pakistan	1973-81	24.2	a
Sri Lanka	1973-82	-9.0	14.0
Middle Income			
Korea	1973-79	116.8	97.7
Malaysia	1973-79	11.7	a
Philippines	1973-80	a	-32.1[b]
		a	-41.2[c]
Singapore	1975-82	a	49.0

[a] Not Reported.
[b] Skilled workers.
[c] Unskilled workers.

Source: Harris and Rashid.

Table 6
Direct, Indirect and Total Nominal Protection Rates in Asia
(Percentages)

Country	Product	1975-1979			1980-1984		
		Direct	Indirect	Total	Direct	Indirect	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Exported Products:							
Pakistan	Cotton	-12	-48	-60	-7	-35	-42
Sri Lanka	Rubber	-29	-35	-64	-31	-31	-62
Malaysia	Rubber	-25	-4	-29	-18	-10	-28
Philippines	Copra	-11	-27	-38	-26	-28	-54
Thailand	Rice	-28	-15	-43	-15	-19	-34
Imported Products:							
Pakistan	Wheat	-13	-48	-61	-21	-35	-56
Sri Lanka	Rice	18	-35	-17	11	-31	-20
Malaysia	Rice	38	-4	34	68	-10	58
Philippines	Corn	18	-27	- 9	26	-28	-2
Korea, Rep. of	Rice	91	-18	73	86	-12	74

Source: Ali, taken from the original in Krueger, Schiff and Valdes.

Table 7
Policy-Induced Factor Price Distortions in Large and Small Non-Agricultural Enterprises

Country	Period	Percent Difference in Labor Costs	Percent Difference in Capital Cost Owing to:				Percent Difference in Wage/Capital Rental Rate
			Trade Regime	Interest Rate	Taxes	Total Capital	
	(Expressed as the Percent Difference in Large Firms' Costs Relative to Small Firms)						
Asia:							
Hong Kong	1973	0	0	0	0	0	0
Pakistan	1961-64	0	-38	-44	+22	-60	+150
Korea	1973	0	- 5	-35	+10	-30	+43
Africa:							
Ghana	1972	+25	-25	-42	+26	-41	+119
Sierra Leone	1976	+20	-25	-60	+20	-65	+243
Tunisia	1972	+20	-30	-33	NA[a]	NA	NA
Latin America:							
Brazil	1968	+27	0	-33	NA	NA	NA

[a] NA = Date Not Available

Source: Taken from Table 7 in Haggblade, Liedholm and Mead.

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