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Employment Generation in Rural Pakistan with a Special Focus on Rural Industrialization: A Preliminary Analysis

SARFRAZ KHAN QURESHI and EJAZ GHANI*

I. INTRODUCTION

Providing employment opportunities in rural Pakistan has been on the policy agenda since the early 1970s when it was realized that the country's reasonably good economic performance had virtually bypassed a significant proportion of people in the rural areas. The magnitude of the expanding labour force in view of the failure in the past to create adequate job opportunities poses a great challenge to the policy-makers to ensure job openings for the new entrants as well as for those who are presently unemployed and/or underemployed. This paper reviews some of the most important factors that have influenced employment creation in rural areas. Sections II, III, and IV deal with the sectoral performance with respect to employment in the agricultural sector, industrial sector and rural development respectively. The summary and conclusions are presented in the final section.

II. AGRICULTURAL SECTOR AND EMPLOYMENT GENERATION

That the employment generation in rural areas has not been vigorous enough to enable the expanding rural labour force to be productively employed is a major trend established by many studies. For example, it is estimated that employment growth was 2.2 percent and 1.6 percent per annum during 1971-72 to 1978-79 and 1978-79 to 1986-87 respectively [World Bank (1989)]. During the same two periods, the elasticity of employment with respect to agricultural GDP was 0.92 and 0.41 respectively. Notwithstanding the declining capacity for employment generation, it is noted that the agriculture sector was able to provide job openings to a dominant majority of the labour force. In this section, an attempt is made to see how the agricultural sector has been able to absorb additions to the labour force and/or the nature of factors which constrained the capacity of the sector to be a still better provider of jobs than it actually has been in the past.

*The authors are Joint Director at the Pakistan Institute of Development Economics/ Visiting Research Fellow at the International Food Policy Research Institute Washington, D. C. and Staff Economist at the Pakistan Institute of Development Economics, respectively.

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There are four basic ways in which agricultural growth contributes to employment generation.[1] These are: (i) increase in cultivated area; (ii) increase in cropped area as a result of technical change and infrastructural investments; (iii) changes in crop mix that emphasize labour-intensive products; and (iv) changes in pattern of landholdings towards smaller units that are known to be better absorbers of labour. If no change occurs in the last three factors, changes in the extensive margin, i.e., increases in cultivated area sets a limit at which employment in agriculture grows. In any real world situation, change is always multifaceted. Pakistan's agriculture is no exception to this law of nature. Almost all causative factors have played a role. The relative importance of different factors, however, has varied over time.

Trends in agriculture in Pakistan show a distinct break since the mid-1960s when new agricultural technology in the form of new seeds and modern agricultural inputs was introduced. Accordingly, we look at the pattern of agricultural change in its two phases, i.e., the pre- and post-green revolution in Table 1. The pace and pattern of agricultural change had an important bearing on the employment situation as we would shortly see.

Agricultural production for all crops grows at the trend rate of about 3.88 percent per year over the period 1947-48 to 1987-88. Food grains, the major beneficiary of the Green Revolution, grew at a rate of about 3.16 percent. The new technology was important for wheat and rice. For most crops, production gains are realized both through the growth of cropped area as well as yields. Area expansion was important in the pre-revolution phase while improvements in yields are generally responsible for production gains since the onset of the Green Revolution. Crops that did not benefit from the new technologies show declining rates of growth in yields over time. In the case of some such crops, production gains are registered due to increased crop acreage due mainly to favourable relative prices for these crops.

The emergence of new green revolution technologies was partly autonomous and partly induced by deliberate public policy thrusts. However, once the process of technical change unfolded itself, it started a chain reaction in terms of many technological and institutional factors that had lasting implications for employment generation in rural areas. It would be worthwhile to briefly look at the changes in the technological and institutional factors in sequence and examine how these factors have interacted with different sources of agricultural growth. One can also examine the implications these sources of growth may have had for employment generation in rural areas.

During the pre-green revolution period from 1947-48 to 1965-66 cultivated area grew at the rate of 1.49 percent per year. In the post-green revolution period, the rate of increase in cultivated area at 0.004 percent per year is too low to have

[1]For a similar analysis for India [see Mishra (1988)].

Table 1

Pre- and Post-Green Revolution Trend Growth Rates for Pakistan

	Production			Area			Yield		
	1947-48 to 1987-88	1947-48 to 1965-66	1966-67 to 1987-88	1947-48 to 1987-88	1947-48 to 1965-66	1966-67 to 1987-88	1947-48 to 1987-88	1947-48 to 1965-66	1966-67 to 1987-88
Crops									
Food Grains	3.16	1.44	4.44	1.29	1.61	0.98	1.85	−0.17	3.42
Wheat	3.38	0.86	5.24	1.55	1.48	1.50	1.80	−0.61	3.68
Rice	3.93	3.63	4.20	2.30	3.20	1.59	1.59	0.42	2.57
Bajra	−1.98	1.15	−4.70	−2.50	0.22	−4.88	0.53	0.94	0.18
Jowar	−0.31	1.62	−2.01	−0.71	1.86	−2.61	0.40	−0.23	0.62
Maize	2.90	2.29	3.15	2.15	2.24	2.08	0.73	0.06	1.05
Barley	−0.02	−1.70	1.16	−0.37	−0.45	−0.53	0.36	−1.26	1.69
Grams	−0.59	0.75	−2.51	−0.18	1.08	−1.96	−0.42	−0.33	−0.57
Pulses	1.55	−2.09	4.02	1.49	−0.69	2.95	0.06	−1.40	1.03
Sugar	4.57	8.06	1.96	3.81	6.60	1.24	0.74	1.37	0.71
Rseed	0.38	0.22	0.02	−1.16	0.17	−2.52	1.56	0.05	2.61
Sesamu	−0.63	−1.39	0.00	−0.92	0.41	−2.40	0.29	−1.79	2.46
Cotton	5.15	4.21	5.65	1.84	1.30	2.22	3.25	2.87	3.36
Tobaco	4.11	12.13	−3.25	3.18	9.15	−2.53	0.90	2.74	−0.73
All Crops	3.88	5.49	2.64	1.28	1.59	0.89	2.56	3.83	1.74

played any role in agricultural growth and, consequently, for employment creation. The increase in the extensive margin in the first period was largely a result of increasing population pressure and on-farm investments by farmers themselves as no major new areas were opened for cultivation by the efforts of government. The increases in crop area as a source of growth for agricultural production and employment was important in both periods as it grew at a rate 1.59 percent and 0.89 percent per year respectively for pre- and post-green revolution periods. The increase in area under crops has been facilitated by an increase in the irrigation intensity from a level of 61 percent in 1950-51 to 82 percent in 1987-88. The increase in irrigation intensity has been brought about by public development expenditure on dams and canals as well as sinking of tubewells by farmers. It is also interesting to note that the increase in water supply from tubewells had preceded the introduction of green revolution technologies in Pakistan. The spread of high-yielding varieties in the case of wheat and rice was extremely rapid in Pakistan. Fertilizer consumption grew at a high rate of 13 percent per year over the period 1966-67 to 1987-88. The changes in the production technologies combined with an increase in area under crops was an extremely significant factor in the creation of jobs in the agricultural sector directly as well as indirectly by way of backward and forward linkages of this sector with the non-farm sector in both rural and urban areas as we would see in the next section.

The impact of bio-technology on crop output and labour use has been positive. However, the mechanical component of the new agricultural technology, i.e., tractorization has been a subject of considerable debate in Pakistan. Some argue that speedy tillage as a result of tractorization was an important factor in increased cropping intensity which, in turn, had raised labour demand. The other school of thought maintains that the extremely rapid rate of increase in the stock of tractors at a rate of 12 percent per year since 1966-67 has displaced labour. The decline in the employment elasticity of the agricultural sector in the period since rapid tractorization supports the hypothesis of labour displacing impacts of the mechanical technologies in Pakistan.

Changes in cropping patterns and/or diversification of farm enterprises can also have significant impacts on farm employment and incomes. On the country level, a marginal increase in the share of crop production in aggregate agricultural output is notice over time. Between 1959-60 and 1987-88, the share of crop production increases from 62 percent to 63 percent. Non-crop sectors especially animal husbandry and poultry being extremely labour-intensive are important sources of employment generation. Their stagnation, in relative terms, in Pakistan can be attributed to a policy of neglect. Within the crop sector, there has also been a shift in area towards crops which are not major absorbers of labour. A shift towards high-value and labour-using activities is needed to generate vigorous demand for labour in the medium to long-term horizon.

The last contributory factor to employment that remains to be looked at is the changes in the pattern of land holdings. Irfan (1988) in a comprehensive review of changes in agrarian structure as revealed by data from the Agricultural Censuses of 1960, 1972 and 1980 notes that there has been a shift in both the number of farms and farm area in favour of marginal and small farmers (defined to belong to a farm size class of below 7.5 acres). This shift holds valid in both relative and absolute sense. Some studies show that there is a negative relationship between size of farm and labour input per acre in all regions in rural Pakistan [Naqvi *et al.* (1989)]. The increase of farm area under small farms was a factor affecting favourably employment opportunities. The increasing predominance of small and marginal farmers has been brought about jointly by land reforms measures and sub-divisions of farm holdings arising out of demographic pressure on land and the inheritance law which entitles sons, daughters, wives and surviving parents to the land owned by a deceased land owner.

The brief discussion of factors contributing to employment generation has centred on the role of technology policy, infrastructure development policy and land reforms policy. Irrigation has had a positive impact on agricultural growth and employment as it was instrumental in raising cropping intensities. New seeds, supported by selective mechanization of certain farm operations, have also had a positive impact on employment. We have, however, shown that tractorization as opposed to tubewell sinking has had an adverse impact on farm employment. Irfan (1988) has shown that the tractorization process was encouraged prematurely by artificially low prices of capital relative to labour costs. New seeds which had increased land profitability had induced large farmers to go in for self-cultivation with capital-intensive techniques of production. This process had also displaced permanent labour on large farms. We would like now to turn to another important factor of the impact of economic policies adopted by Pakistan on rural employment in general and agricultural employment in particular. Most developing countries, including Pakistan, have sometimes directly, but often indirectly, taxed the agricultural sector through distorted incentives. The distortion in incentives is brought about by either sector-specific (direct) and/or by economy-wide (indirect) policies. The impact of direct pricing policies is measured by the difference between the prices domestic producers receive and the prices they would receive if sector-specific distortions are removed. The impact of indirect policies on incentives is measured by the difference between domestic producer prices and the same prices under the assumption that equilibrium free trade exchange rate would prevail and that no trade distortions in the tradable non-agricultural sector would be present. A recent study Krueger *et al.* (1988) has estimated these coefficients for cotton and wheat in Pakistan for two periods, 1975–79 and 1980–84. Direct, indirect and total nominal protection rates (measured as percentage difference) for cotton were –12, –48 and –60 for the

first period while for the second period, these rates respectively were –7, –35 and –42. For wheat these rates for both periods respectively were –13, –48 and –61 for the first period and –21, –35 and 56 for the latter period. In all cases, the levels of indirect taxation via real exchange rate and protection policies on non-agricultural commodities was greater than direct interventions. The penalization of agriculture described above must have had a significant negative impact on production and employment in the sector in view of the positive supply elasticities for most crops. The depressed production and income levels in agriculture must also indirectly have resulted in reduced employment through backward and forward linkages between agriculture production and the rest of the economy including non-farm rural and urban sectors.

III. RURAL INDUSTRIALIZATION AND EMPLOYMENT

Unlike the case of the agricultural sector where there is a reasonably good data base and some previous analytical work, the literature on rural industries in Pakistan is extremely scanty. In the present section, we attempt first to give a picture of the importance of rural industries as a source of employment generation.[2] We would then discuss the effectiveness of economic policies and sector-specific policies and programmes in generating rural employment opportunities.

The industrial sector in Pakistan is extremely diverse. At one end of the scale, there are large-scale industrial units concentrated in urban areas. At the other end, there are household units in thousands in thousands of villages. Modern small-scale industries are located in large cities as well as small towns. Some of these units may also be located in rural areas. From the angle of rural employment, household and small-scale units located in the rural areas are of direct importance. Modern small-scale units even when located in towns can provide employment to rural workers if these units have subcontracting arrangements with units established in rural areas or there is a practice of commuting of workers from rural to urban areas.

Based on the Census of Manufacturing Industries and Survey of Small and Household Manufacturing Industries for 1983-84, Table 2 attempts to provide the breakdown of industrial employment by rural and urban areas and large-scale formal and small-scale unregulated sector. For 1983-84 – the only year for which data are available – out of a total 430,554 industrial units, .04 percent belong to the large-scale formal sector while the rest belong to the unregulated sector. Out of a total employment of 1,421,447, 33 percent were employed in the formal sector while 67 percent were employed in the informal sector. The number of persons employed

[2] For a comprehensive regional view of the role of rural industries in Asia [see Hirashima (1989); Islam (1987) and Meyer (1989)].

Table 2

Number of Enterprises and Employment in the Industrial Sector of Pakistan

Items	Large-scale Formal Sector	Small-scale Unregulated Sector: Manufacturing Units	Small-scale Unregulated Sector: Household Units	Small-scale Unregulated Sector: Sub-total	Grand Total
1. Number of Enterprises	4,047 (0.04)	261,168 (60.66) (100)	165 339 (38.40) (100)	426,507 (99.06) (100)	430,554
a. Rural	–	79,938 (30.61)	104,673 (63.31)	184,611 (43.28)	184,611
b. Urban	4,047	181,238 (69.39)	60,666 (36.69)	241,896 (56.72)	245,943
2. Number of Person Employed	475,957 (33.48)	653,728 (45.99) (100)	291,762 (20.53) (100)	945,490 (66.52) (100)	1,421,447
a. Rural	–	208,796 (31.94)	181,197 (62.10)	389,993 (41.25)	
b. Urban	475,957	444,932 (68.06)	110,565 (37.90)	555,497 (58.75)	
3. Employment per Enterprise					
a. Rural	–	2.6	1.7	2.1	
b. Urban	117.6	2.4	1.8	2.1	

Source: For large-scale formal sector, Government of Pakistan, *Census of Manufacturing Industries, 1983-84* (Federal Bureau of Statistics Statistics Division); for small-scale unregulated sector, Government of Pakistan, *Survey of Small and Household Manufacturing Industries, 1983-84,* for rural and urban areas.

suppliers are the most common non-institutional sources of credit in rural areas. Industrial estates have been slow to be colonized especially in less developed rural areas.

Policies to encourage backward linkages of the agricultural sector with the rural small-scale manufacturing sector and the increased demand resulting from the inflow of remittances from abroad in rural areas have had more of an impact on employment than the sector-specific support programmes for rural and small-scale industries. Most observers of the rural scene in Pakistan believe that the use of machines in agriculture has generated substantial employment opportunities both directly and indirectly. Jobs like tubewell operators and tractor drivers appeared as soon as mechanization of agriculture became an important phenomenon on the rural scene. The installation of public tubewells to fight the menace of waterlogging and salinity had a beneficial side effect as their installation in rural areas induced the installation of private tubewells to increase the supply of water for irrigation purposes. An industry to produce, service and repair tubewell machinery emerged rapidly in the informal sector in small towns. The tubewells sunk were generally small and were of a type that simple adaptation of traditional skills already existing in rural areas sufficed to manufacture at least some parts of the tubewell machinery. The small-sized tubewells also implied a rapid explosion in their demand as even small farmers could afford to install the wells. The impact on non-farm employment of tractors was, however, insignificant in comparison with that of the tubewell technology. The policy of liberal and cheap credit for the purchase of large tractors, until recently, meant that only large tractors would be in demand. Due mainly to the sophisticated nature of the technology, tractors were either produced by the formal manufacturing sector and/or were imported.

The rapid spread of private tubewells illustrates the importance of effective demand in the growth process of rural industries. The discrimination against agricultural sector noted in an earlier section must have suppressed demand for the products of industries including those established in rural areas. Reduced agricultural incomes imply fewer forward and backward linkages with the rest of the economy.

Another systematic bias in favour of large-scale industry pertains to the policy-induced distortions in factor and output markets. Labour and tax laws, on paper at least, have favoured small-scale firms especially in rural areas. Trade, interest rate and licencing procedures have favoured large-scale firms generally established in urban areas. On balance, distortions have induced higher labour costs and lowered capital costs and have resulted in reduced labour use especially in rural areas.

IV. DIRECT EMPLOYMENT CREATION PROGRAMMES

The policy response to the problem of the improvement of the quality of life in rural areas has a chequered history in Pakistan. Many different specialized pro-

grammes aimed at creating employment opportunities for the transformation of rural areas under different names have been tried in Pakistan as in other developing countries.[3] Village Agricultural and Industrial Development (popularly known in Pakistan as Village AID) was initiated around mid-1950s. This programme was replaced by the Rural Works Programme in 1960s. The Seventies saw the introduction of, first, the Peoples Works Programme and then, the Integrated Rural Development Programme. Almost all programmes mentioned above aimed at direct employment creation for the rural poor. The goal often was to provide employment and income opportunities during the slack seasons. Apart from the provision of jobs, public works programmes had the over-riding objective of the creation of physical infrastructure in order to provide support for the boosting up of agricultural development programmes. The overall commitment of resources to the Rural Works Programme in the 1960s and the People Works Programme in the 1970s were low to have had any major noticeable impact on employment situation. The scope of the programmes was narrow in terms both of sectoral and geographic coverage. At their very best, the programmes offered limited employment entitlements for short periods during a year. The implementation of these programmes was done through local government institutions which in turn, were closely directed by the provincial governments. The allocation of resources, according to administrative expedience and local political interests, had adverse consequences for institution building. The provision of jobs to the rural poor for installation and maintenance of physical infrastructure also meant that benefits from the programme were lop-sided in favour of large landowners. The adverse distributional consequences and the perception of politically-based allocation of funds provided enough ammunition to successive governments to drop the programmes identified with the previous government. The possibility of buying local support from the influential segments of rural society was tempting enough to restart the public works programmes under a different name.

However, the disenchantment with the working of the direct employment creation programmes in Pakistan was partly responsible for a major review of Pakistan's rural development strategy in the Sixth Plan starting in 1983. A major shift in investment priorities in favour of the social sectors and rural infrastructure was envisaged in the modified planning strategy. The major emphasis of the new strategy is on infrastructural building – both physical and human which has a direct bearing on the supply of basic needs goods in rural area sectors. Employment opportunities are opened for skilled categories of labour also. However, provision of employment for the rural poor is still seen as a derivative of overall growth performance through income and employment multiplier impacts.

The shift in priorities was preceded by an introduction of an elected system

[3] For a detailed analysis of countries other than Pakistan [see Muqtada (1989)].

of local government institutions in both rural and urban areas in Pakistan in 1979. Under this system, a two-tier set-up of local government in rural areas was introduced. District Councils and Union Councils are elected bodies having major responsibility for the development work. Election to these bodies have been held thrice at an interval of four years since 1979. The structural features of the new local government institutions were designed to give an important boost to an effective implementation of social and economic development programmes in rural areas. Provision was made to give to these Councils enhanced local financial and administrative resources. No formal comprehensive evaluation of the new system is available. It is safe, however, to argue that the Councils should provide a substantial leadership role in the future for identification of local needs in the rural areas. It should also provide an effective mechanism of meaningful grass roots institutional connection between the rural population and the government departments.

The efforts in the area of the creation of participatory institutions have been complemented with the initiation of a number of policy steps for the promotion of self-employment and entrepreneurship development. The main objective is to facilitate the creation of personal assets for the target groups and not the community assets as was the case for the Rural Works Programme. The main mechanisms adopted are the provision of subsidized credit and/or training facilities for different categories of rural people. The efforts in this regard in Pakistan are too small to merit any detailed comment.

VI. CONCLUSIONS

The review of the employment situation in rural Pakistan indicates that labour absorption could have been higher than the levels achieved in the past. Labour absorption in the agricultural sector seems to have declined with the passage of time. Institutional and technological changes within agriculture have exhibited a contradictory impact on agricultural employment. The landownership pattern has been moving in favour of small farmers who apply more labour to each acre cultivated by them. The new agricultural technology has shown mixed results. The increase in irrigation intensity with the help of tubewells and new seeds were instrumental in increased job creation, both in the farm and non-farm sector, through the backward and forward linkage of agriculture with the rest of the economy. Premature mechanization at a fast pace resulted in lower rates of labour input use. Tractorization also did not have favourable backward linkages with the domestic manufacturing sector. The non-farm employment in rural manufacturing and the services sectors has been more buoyant than agricultural employment. The employment impact of the public works type programmes has been minimal due mainly to the limited resources used and the faulty designing of programmes with emphasis on temporary slack season employment and bureaucratic supervision rather than people participation.

The policy prescriptions that result from our review are straightforward. The policy bias against agricultural production and against small firms needs to be corrected through a thorough reform of both the sector-specific and economy-wide distortion of incentives. Second, broad sector-wide programmes benefiting both the farm and non-farm rural sectors needs to be undertaken. In fact, the adequate supply of rural infrastructure – both physical and human – is an effective way of ensuring remunerative rates of return. Third, the recent efforts in Pakistan to upgrade levels of living in rural areas and to provide increased jobs opening through wage-based employment and/or self-employment need to be strengthened. Last but not the least, it should be emphasized that policies for employment promotion in rural areas would of necessity be a multi-dimensional exercise. It would have to cut across many sector. The rural employment strategy would need to be supported by a labour-intensive development strategy.

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Comments on "Employment Generation in Rural Pakistan with a Special Focus on Rural Industrialization: A Preliminary Analysis"

The paper raises some important issues pertaining to rural employment particularly on the employment implications of changes in technology, in cropping patterns and in the size distribution of holdings. The impact of government policies on employment creation in the farm sector is also examined. The main finding of the paper is that labour absorption has declined in the rural economy, a tendency which is reflected not in high rates of open unemployment but in the prevalence of low income, low productivity employment. As a result of widespread underemployment the incidence of rural poverty has risen and there has also been a sharp increase in disparities in per capita income between the agricultural and non-agricultural sectors. The falling labour absorptive capacity in the agricultural sector is largely seen as the result of the widespread adoption of mechanical technology, changes in crop mix towards less labour using crops while the shift in the agrarian structure towards small farms is expected to have a positive impact on employment. Government policies pertaining to the rural sector have been ineffective, at best as in the case of various public works type programmes or negative, as in the case of price policy and subsidies on tractors.

Unfortunately in a number of instances the empirical basis of these observations is weak and the conclusions of the study are not based on a systematic and thorough assessment of the available evidence. Further, the study does not give due attention to some critical aspects of the problem of rural employment particularly landlessness and the impact of migration.

The author primarily relies on trends in relative per capita income in the agricultural and non-agricultural sector and on changes in the poverty level in the rural and urban areas to support his thesis of declining labour absorption in the rural areas. However, these estimates do not present an adequate means of empirically verifying this argument. For instance, the calculation of per capita agricultural income is based on the assumption that the agricultural and non-agricultural population are mutually exclusive. Whereas in the majority of cases a large number of agricultural workers have some sort of secondary employment in the non-farm sector.

Similarly, estimates of poverty figures are quite controversial due to the arbitrariness of the poverty line and incomparability of data over time due to changes in the methodology. Further, even if this data is accepted it shows a dramatic decrease in poverty in the late Seventies and early Eighties which is not explained by the author and which is contrary to the author's argument of declining levels of labour absorption in the rural sector. The improvement in living standards of the rural population in the recent years has in fact been mainly the result of forces outside the agricultural sector in the form of the large outmigration from, and the subsequent inflow, of remittances to the rural areas. The impact of migration on rural employment and levels of living is entirely ignored in the analysis.

A better understanding of the rural labour situation could have been provided if available evidence had been used to examine changes in landlessness, trends in wage rates, changes in the use of different type of labour such as between family and hired labour or between permanent workers and casual labour, changes in the occupation structure of the rural labour force etc.

The empirical analysis of the impact of changes in the agricultural sector on employment also tends to be sketchy and contradictory. Thus the author claims that there is no conclusive evidence on the impact of mechanical technology on labour use while in the conclusion the labour displacing impact of tractors is mentioned as the major reason for the fall in the labour absorptive capacity of agriculture. Further, the authors' statement that the crop-mix has changed in favour of less labour intensive crops needs to be elaborated and substantiated by any evidence of these changes.

Moreover, the discussion on the employment impact of changes in the agrarian structure focusses on the increase in the number of small farms which is viewed as a favourable development from the employment point of view due to the observed greater labour use per acre associated with smaller holdings. However, the author fails to mention that changes in the agrarian structure due to population growth and large-scale eviction of tenants have not only been associated with a shift in farm size but also by a sharp increase in the incidence of landlessness with serious consequences for rural employment.

The paper also entirely overlooks the impact of large-scale outmigration to the Middle East, possibly the most important influence on rural employment and income in the Eighties. This factor has been shown to have had a tremendous impact on the rural economy not only in at least temporarily alleviating the employment problem but also in terms of the impact of remittances in raising the living standards. Further, the demand fuelled by remittances has contributed significantly to the increase in non-farm job opportunities in the rural areas specially noticeable in the construction sector.

Finally, I would like to briefly comment on the authors' analysis of the

employment effect of public policy. Whereas there is general agreement that the public works programme has had little or no impact on rural employment, the authors conclusions about the detrimental impact of price policy on agricultural growth are controversial and need to be substantiated. Available empirical evidence on the contrary, indicates that while relative prices are an important determinant of supply response in case of individual crops, the impact of prices on aggregate output is not significant. Excessive reliance on price policy as a means of stimulating agricultural production can be counterproductive since it detracts from the importance of non-price factors, such as technological and structural problems, which are constraining farm productivity at low levels.

Shahnaz Kazi

Pakistan Institute of
Development Economics,
Islamabad.