

AGRICULTURE GROWTH AND POVERTY REDUCTION: A POLICY PERSPECTIVE

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INTRODUCTION

The challenge for Pakistan's economic policy today is to achieve a sustainable high economic growth rate and at the same time to restructure growth for faster poverty reduction. Since the majority of poor in Pakistan live in the rural areas, an analysis of growth and employment generation in the agriculture sector may be helpful in designing a pro poor growth strategy. This paper examines the structural constraints to sustaining a high and stable agriculture growth and proposes a policy framework for achieving accelerated agriculture productivity, employment generation and poverty reduction.

I. Agriculture Growth: Past Pattern and Present Potential

The pattern of output growth in the crop sector over the last thirty-five years suggests the emergence of institutional constraints to both sustainability and stability of growth. The available evidence shows that the growth performance in the crop sector over the last three decades is characterized by a slow down in the annual growth rate of major crops, a declining growth rate of factor productivity¹ and an increased instability of output growth. For example the average annual growth rate of major crops declined from 3.7% during the 1970s to 2.2% during the 1990s (See Table 1). At the same time the frequency of negative growth in some of the major crops has increased significantly since 1980s. If we consider wheat, for example, which is by far the largest crop (it accounts for over

¹ Productivity growth (total) in agriculture declined from 3.9 percent in the 1980s to 1.8 percent in the 1990s. See, Nomaan Majid, Pakistan: An Employment Strategy, ILO/SAAT, December 1997 (Mimeo), Table A5, p.58.

30% of value added in major crops), we find that the average annual growth rate has been declining steadily since the 1970s.² (See Table 2).

The slow down in the growth of factor productivity and yields per acre gives cause for concern in view of the fact that it has come at a time when the extensive margin in the crop sector has been reached and further growth will have to depend on increasing the efficiency of input use.

TABLE 1
AVERAGE ANNUAL GROWTH RATE OF MAJOR CROPS
(INDEX OF AGRICULTURE PRODUCTION OF MAJOR CROPS)

YEARS	AVERAGE ANNUAL GROWTH RATE (MAJOR CROPS)
1970-71 TO 1979-80	3.7%
1980-81 TO 1989-90	3.3%
1991-92 TO 2000-01	2.2%

Source: Pakistan Economic Survey, Various Years, Government of Pakistan, Finance Division, Economic Advisor's Wing, Islamabad.

TABLE 2
WHEAT
AVERAGE ANNUAL GROWTH RATE OF YIELD/ACRE AND THE
FREQUENCY OF NEGATIVE YIELD INCREASE, 1970 TO 2003-04

PERIOD	AVERAGE ANNUAL GROWTH RATE OF YIELD/ACRE (PERCENT)	FREQUENCY OF NEGATIVE YIELD INCREASE (COMPARED TO PREVIOUS YEAR)
1970-71 TO 1979-80	3.18	2
1980-81 TO 1989-90	2.06	4
1990-91 TO 1998-99	1.80	4
1999-00 TO 2003-04	-0.5	2

Source: Pakistan Economic Survey, Various Years, Government of Pakistan, Finance Division, Economic Advisor's Wing, Islamabad.

² See: Akmal Hussain: Employment Generation, Poverty Alleviation and Growth in Pakistan's Rural Sector: Policies for Institutional Change. Report prepared for the International Labour Organization, Country Employment Policy Review, Pakistan, ILO/CEPR, March 1999.

II. Unstable Agriculture Growth and Rural Inequality

Under conditions when higher input use per acre is required to maintain yields, subsistence farmers with few resources are likely to suffer a greater than average decline in yields compared to large farmers. At the same time due to lack of savings to fall back upon, poor farmers are relatively more vulnerable to bad harvests under conditions of unstable growth.³ Consequently, slower and more unstable growth would be accompanied by a tendency for growing inequality in rural income distribution, together with increased poverty. The available evidence suggests that this is indeed the case in Pakistan. Table 3 shows the Gini index (which is a measure of the degree of inequality) in the rural areas has increased from 23.89 in 1992-93 to 25.21 in 1998-99. At the same time, the percentage of population below the poverty line has increased from 17% in 1986-87 to 32.2% in 1998-99.

TABLE 3

**POVERTY AND RURAL INCOME INEQUALITY
(Gini Coefficient),
1992-93 to 1998-99**

INDEX	1992-93 HIES	1993-94 HIES	1996-97 HIES	1998-99 PIHS
Poverty (All Pakistan)	26.6%	29.3%	26.3%	32.2%
Rural Inequality	23.89	23.45	22.65	25.21

SOURCE: Federal Bureau of Statistics, April 2001.

³ Akmal Hussain, ILO/CEPR, op.cit. Page-4.

III. Institutional Constraints to Agriculture Growth and Employment: A Policy Perspective

Underlying the phenomenon of deceleration and increased instability of crop sector growth, is the emergence of three major institutional constraints that need to be addressed within an integrated policy perspective:

III.1 Reduced water availability and increased water requirement per acre.

Reduced water availability at the farm gate due to poor maintenance of the irrigation system in the past and low irrigation efficiencies of about 37%. While the availability of irrigation water has been reduced, the requirement of water at the farm level has increased due to increased deposits of salts on the topsoil and the consequent need for leaching. For example, according to the government about 33 million tons of salts are annually brought into the Indus Basin Irrigation System, out of which 24 million tons are being retained.⁴

What makes improved efficiency of irrigation even more important is that the extensive margin of irrigated acreage has been reached, so that future agricultural growth will have to rely on improving the efficiency of water use and other inputs. Thus the rehabilitation of Pakistan's irrigation system for improving irrigation efficiency has become a crucial policy challenge for sustainable agriculture growth.

III.2 Seeds, Agriculture Research and Global Warming

It is well known that high yielding varieties of seed introduced at a point in time, gradually lose their potency through reuse, changing micro structure of soils, and changing ecology of micro organisms in the top soil. Therefore, breeding of more vigorous seed varieties adapted to local environmental conditions and their diffusion amongst farmers is required through an effective research and extension program.

⁴ Interim Poverty Reduction Strategy Paper, Government of Pakistan, November 2001, Page 23.

At the moment, there is no organized seed industry in Pakistan to meet the needs of farmers for the supply of vigorous varieties of seeds for even the major crops. The existing institutional framework for agriculture research suffers from a proliferation of research institutes, which are inadequately funded, often lack professional expertise, proper equipment and the research environment necessary to produce significant results. Finally, there is considerable overlapping of research responsibilities across institutes. Consequently, research has produced inadequate outcomes in terms of operationally usable results.

Seed varieties research where it has produced new seeds has involved a large time lag in getting research to the farmers. In wheat, for example, the average age of seed varieties is 11 years compared to 7 years for all developing countries. It has been shown that there was a sharp decline in growth of total factor productivity in Pakistan after 1975. Pakistan's lower factor productivity growth compared to India can be attributed to the poorer level of research and extension in Pakistan compared to India.⁵

A new dimension to the imperative of improving research capability in the crop sector is indicated by the possibility of declining yield per acre related with global warming. Given the sensitivity of wheat seed to temperature increase, even a 2-degree centigrade increase in average summer temperature could mean an absolute yield decline of between 10 to 16 percent during the 21st century.⁶ With a 2.8 percent population growth even a decline of 5 percent in yield per acre

⁵ Mark W. Rosegrant and Robert Evenson: "Agricultural Productivity Growth in Pakistan and India: A comparative Analysis", presented at Pakistan Institute of Development Economists Ninth Annual General Meeting, Islamabad, 1993.

⁶ If atmospheric carbon is doubled the average summer temperatures in Pakistan are expected to increase from 1.5 C to 4.5 C (base average of 2.5 C), over the next 70 years. This could lead to a decline in wheat yields from 10 percent to 60 percent, depending on the type of wheat seed, planting time, related atmospheric/weather conditions. See: Qureshi, Ata and Iglesias: Implications of Global Climate Change for Pakistan Agriculture: Impacts on Simulated Wheat Production, Climate Institute, Washington, D. C. USA, 1992.

associated with global warming, could mean serious food deficits for Pakistan. It is, therefore, necessary to develop heat resistant varieties of food grains.

The current inadequacy of agricultural research and poor diffusion amongst farmers needs to be urgently addressed. This is particularly so in a situation where future agricultural growth and labour absorption will have to depend more on input efficiency than on enlargement of irrigated acreage which was one of the major sources of agriculture growth in the past.

The following issues may be identified for research and subsequent diffusion:

- i) Development of (a) new heat resistant varieties of wheat, (b) short duration and late sowing varieties of wheat to enable multiple cropping, (c) heat resistant, pest resistant, short duration and high yielding varieties of cotton, (d) development of short duration and high yielding varieties of pulses and oilseeds to fit into cropping pattern of late Rabi/late Kharif crops.
- ii) Rehabilitation of agriculture in saline and water logged soils.
- iii) Improvement of barani agriculture by research into designs of low-cost rainwater reservoirs and chalk dams for water-run off, for irrigation and soil conservation.
- iv) Efficient harvest and post harvest handling technology for different crops.
- v) Development of hybrid seeds of Maize, Sorghum, Sunflower and other crops.

On the basis of wide ranging consultations with farmers in the Punjab and Frontier provinces as well as officials concerned with agriculture research during the last two years, it can be proposed that for more effective research and its diffusion amongst farmers it may be necessary to take the following initiatives:

- i) Restructure the existing institutional framework for seed development in particular and agriculture research in general to (a) bring greater professionalism, (b) improve monitoring and evaluation of research work.
- ii) Focus research on improving input productivity at the region specific level. In this context the outcomes of controlled experiments at research institutes need to be tailored to the specific needs and conditions of farms in the region.
- iii) Maintain regular interaction between research workers and farmers in the field by establishing an institutional linkage between research and village level institutions for diffusion of such research. Village level community organizations of farmers for participatory development have demonstrated the ability for a fruitful dialogue with research and extension institutions in the government and non-governmental sector.

Such interactions amongst farmers and agricultural researchers could redirect research to the specific needs and conditions of farmers and also enable a more rapid adoption of improved seeds and agricultural practices. Support organizations such as the PRSP in the Punjab (during August to October 1998), and AKRSP in the northern areas (during the early 1990s) have demonstrated an ability for facilitating the adoption of new knowledge and agricultural practices, particularly in cases where such adoption requires training and credit to farmers at the village level.

III.3 *Soils and Agricultural Practices*

One of the most important constraints to sustainable growth and employment in the crop sector is the degradation of soils, resulting from improper agricultural practices such as: (a) lack of crop rotation and the resultant loss of humus in the top soil, (b) stripping of top soil and resultant loss of fertility associated with over-grazing, (c) water erosion along hillsides and river banks due to cutting down of trees and depletion of natural vegetation which constitutes a water

absorber and hence protection against erosion. According to one estimate,⁷ over 11 million hectares have been affected by water erosion and 5 million hectares by wind erosion.

Degradation of soils may be an important factor in low and declining growth in yields per acre in Pakistan's crop sector. For example, average annual increase in yield per acre of wheat during 1990's in Pakistan has been 1.8 percent compared to 2.9 percent in the Indian Punjab, and 2.7 percent for all developing countries. A recent study suggests that the observed declining yield response to input use in Pakistan's agriculture is indicative of increasing soil degradation.⁸ It is clear that in order to create a sustainable basis for accelerating agricultural growth and employment in the future it would be necessary to induce agricultural practices through which the organic material in the topsoil can be replenished and maintained. The existing extension services do not have the outreach, motivation and the management capability to achieve the adoption of sustainable agricultural practices at the farm level. What is required is the facilitation of autonomous community organizations at the village level and their institutionalized linkage with different tiers of local government. These autonomous village level organizations can demonstrate the efficacy of improved agricultural practices to their members, together with training and accessing of technical support from local government, donor agencies, private sector firms and specialized NGOs.

⁷ Alim Mian and Yasin Mirza: Pakistan Soil Resources, National Conservation Strategy, Sector Paper IV, Environment and Urban Affairs Division, with IUCN, 1993.

⁸ Derek Byerlee : Agricultural Productivity in Pakistan, Problems and Potential, World Bank Agriculture Sector Review, cited in World Bank Report No. 13092 – PAK, op. Cit.

IV. Accelerating Crop Sector Growth and Employment Generation

The Green Revolution in Pakistan occurred in the context of an elite farmer strategy. This was because the large farmers, given their greater financial power unlike the small farmers, could afford the new package of seed, water, fertilizer and pesticides package in the right quantities and at the right time in the production cycle. Now as large farms approach the ceiling to their yield per acre, it is the small farm sector with a greater potential for yield increase that can play an important role in accelerating agriculture growth. My estimates of labour demand by size class of farm for different crops, show that small farms can generate more than twice as much employment per acre than large farms. Thus a shift from the elite farmer strategy of the past to a small farmer strategy now, can enable a faster and more equitable agriculture growth with faster employment generation.

Table 4 shows by way of illustration the increased employment demand that can be generated if the current yield potential of two major crops (wheat and HYV rice), could be realized through improved agricultural practices, vigorous seeds at current levels of technology and increased water availability through higher delivery efficiency of irrigation. The estimates indicate that an employment potential of only about 16 million person days annually (about 80,600 persons employed for the whole agricultural year) exists in the crop sector for wheat and HYV rice. However, for farms below 25 acres substantially more employment could be generated through the realization of the yield potential of these crops compared to large farms. These figures suggest that if policies for increasing the yield per acre of major crops were to focus on the small farm sector, a faster and more equitable growth with higher employment generation could be achieved in the crop sector.

If a village level institutional structure could be established to enable small farmers to achieve increased water application in the root zone of the crops, application of composite fertilizers in congruence with field specific soil nutrient requirements and

better quality seeds, a yield increase of 30 percent in wheat and 50 percent in HYV rice could be achieved within a relatively short period. This implies an additional annual employment potential of about 16 million person days in wheat and rice alone. Substantially higher increases in output and employment could be achieved with improved agricultural practices, replenishment of humus in topsoil, breeding and diffusion of more vigorous seed varieties, and a rehabilitation of the canal irrigation system.

Even though a substantial potential exists for increasing employment through the small farm crop sector, my estimates suggest that both the level of employment demand as well as the potential for increasing it through the crop sector are rather limited compared to the size of the rural labour force. The brunt of the burden of increasing rural employment generation would therefore have to be borne by the non-crop sector. This would include livestock development especially milk production, food processing off-farm micro enterprises and industrial clusters in rural areas consisting of small scale units in the fields of light engineering, automotive, electrical and construction. This issue is discussed in the ensuing section.

In this Section we will examine the possible role of the off-farm sector in achieving some of the macroeconomic objectives such as accelerating GDP growth, employment, poverty alleviation and relieving pressures on the balance of payments. The two main off-farm sectors in rural areas, i.e., livestock development with reference to milk production and small manufacturing enterprises, will be analyzed in terms of their major features to show how (if their potential is actualized) they can help to not only accelerate GDP growth, but to restructure it so as to enhance its capacity to increase employment, alleviate poverty and reduce the balance of payments deficit. In this context, new policy initiatives will be proposed and the institutional framework for actualizing the potential of both milk production and small manufacturing enterprises will be specified.

TABLE 4
EMPLOYMENT POTENTIAL IN THE CROP SECTOR, BY SIZE CLASS OF FARM

Crop	Size of Farm (Acres)	Annual Person Days of Employment	Potential for Additional Person Days of Employment Associated with Yield Increase
Wheat	Under 7.5	102,309,209	4,296,987
	7.5 to under 25	159,406,564	4,463,384
	25 and above	110,524,161	1,547,338
HYV Rice	Under 7.5	36,587,718	2,195,263
	7.5 to under 25	54,364,647	2,609,503
	25 and above	27,919,194	1,005,091
		Total	16,117,566

- Sources: i) Pakistan Economic Survey 1997-98, Government of Pakistan, Finance Division, Economic Advisor's Wing, Islamabad.
 ii) WAPDA XAES, (Unpublished data)
 iii) Shamim A. Namdar: Employment Implications of Agricultural Growth Occasional Study, Punjab Economic Research Institute, Lahore, March 1980.
 iv) World Bank Report No. 13092 - Pak, November 1994.

Note: Calculations Mine.

IV.1 *Livestock Development, Poverty Alleviation and Employment Generation: A Policy Framework*

Pakistan's largest farm product is milk, with an annual output of 11.069 billion litres valued at Rs. 177 billion. The value is even higher than wheat, the largest of the major crops, with an output of 18.6 million tonnes, (1997/98), valued at Rs. 111.6 billion, (wheat constitutes 30.78 percent of total value added of major crops). What is even more significant is that the potential for increasing output in the next five years is far greater in the case of milk, than in the crop sector. Average yields of milch animals in Pakistan are one-fifth the European average. Discussions with farmers and private sector professionals in the field, suggest that milk output can be doubled with improved breeding, feeding, preventive health and marketing.

Equally important is the fact that the incomes of poor peasant households can be substantially increased through the acquisition of additional milch animals and increased milk yield per animal. At current levels of milk output of a moderately productive buffalo a poor peasant can earn a net income of about 2500 per month per milch animal. There is considerable potential for increasing household employment and income if a participatory support system at the village and tehsil levels could be established for the provision of credit, training in breeding, veterinary medicine and access over marketing services to poor peasants. If such an institutional framework is linked up with private sector milk purchasing centres in village clusters, then a rapid growth of milk output in Pakistan could be achieved together with increased income and employment of poor peasant households.

There is currently a huge potential export market for milk in Central Asia and the Middle East. A doubling of milk output in Pakistan with adequate refrigerated transport (both road and air) and milk-packaging services could enable a substantial increase in Pakistan's export earnings. In doing so Pakistan could at the same time achieve rapid poverty reduction in the rural areas, increased employment and improved rural income distribution.

A Dairy Development Organization (DDO), registered under the Companies Act as a non-profit company, needs to be established in each province as an apex organization that can coordinate the provision of animal husbandry facilities, training in breeding, feeding and disease control together with credit and marketing facilities to peasant households through village/tehsil level participatory support institutions. The DDO should have an independent Board of Directors, consisting of individuals of commitment and integrity and with a variety of backgrounds covering experience in private sector firms working in agriculture related fields, NGOs involved in rural poverty alleviation, village level CBOs, and international experts in dairy development.

The DDO could have the following functions: (i) Bring to bear available research and international as well as local expertise in support of a major program for increasing the number and productivity of milch animals of poor peasant households. (ii) provide a

forum for various village level community based organizations (CBOs), district level NGOs and other rural support organizations to share their experiences, improve their effectiveness in facilitating increased milk production and sale, of poor peasant households. (iii) Coordinate with the provincial governments to provide refrigerated road transport facilities and refrigerated storage facilities at airports, (iv) coordinate with private sector firms for packaging and international air cargo facilities for exports. The export of milk, apart from existing private sector milk packaging firms, could also be undertaken by apex organizations of village level CBOs.

The work of the DDO, that is directly related with poverty alleviation, could be funded by income from an endowment fund that could be created by institutional support from: (i) The recently established Pakistan Poverty Alleviation Fund (PPAF), (ii) multilateral development agencies such as the ILO, CIDA, UNDP and the World Bank, (iii) the Annual Development Programs of the provincial governments, (iv) private sector firms.

IV.2 *A Policy Framework for Accelerating Growth of Small Scale Enterprises*

IV.2.1 Small Scale Enterprises in the Context of Macroeconomic Issues

In spite of a high trend rate of growth of GDP (6 percent annual growth rate during 1960 to 1990), its impact on poverty and unemployment is relatively modest.⁹ It has been argued that the capacity of GDP growth in Pakistan to reduce poverty and generate employment is constrained by the structure of the economy.¹⁰ While GDP growth has

⁹ For example, Indonesia with a growth rate close to Pakistan's, in just one decade (1972-84), was able to reduce its population below the poverty line from 58 percent in 1972 to only 17 percent in 1984. By contrast, Pakistan in three decades (1962-92) could reduce its poverty figure to a much lesser extent from 40 percent in 1962 to 22 percent in 1992. See Report of the Task Force on Poverty Eradication, op. cit.

¹⁰ For a discussion on how the structure of Pakistan's economic growth process constrains its capacity to alleviate poverty, see: Overcoming Poverty, Report of the Task Force on Poverty Eradication, May 1997.

neither generated adequate employment nor overcome poverty in the real economy, it has involved such a sharp increase in loan dependence, that debt servicing has become a critical problem in the financial sphere.¹¹ At the same time, there is concern that rural-urban migration into large urban centres has reached a magnitude that is far greater than the existing financial and administrative capability of government to provide for with even a minimum level of basic services.

When the major features of Small Scale Enterprises (SSEs) in Pakistan are examined in the context of macroeconomic pressures, the prospect emerges of relieving these pressures to some extent through inducing an accelerated growth of SSEs.

Let us consider SSEs with respect to their capabilities for efficiency of capital use, employment generation, poverty alleviation, and import dependence.

There is evidence to suggest that in the case of Pakistan, small-scale industry generates both more employment per unit of investment as well as more value added per unit of capital compared to the large scale manufacturing sector. A comparison of Capital/Labour, Value Added/Capital and employment cost ratios for large and small scale industries suggest that the number of jobs generated in small scale industry per unit of capital is 5 times more than in large scale manufacturing. Similarly, when we compare the efficiency of capital use in the two sectors, i.e., value added per unit of capital (VA/K), we discover that VA/K is almost twice as much in small scale industry compared to large scale industry.¹² More recent evidence suggests that over 80 percent of employment in the manufacturing sector as a whole can be attributed to SSEs even in

For a discussion on the low employment elasticity in the manufacturing sector, and the fact that it originates in the structural features of this sector, see: Pakistan: An Employment Strategy, ILO/SAAT, December 1997.

¹¹ Pakistan's debt servicing burden as a percentage of federal government revenues had reached 61.5 percent by the year 1997-98. See: State Bank of Pakistan, Annual Report, 1997-98.

¹² ILO/ARTEP: Employment and Structural Change, Issues for the Eighties, Report for the Planning Commission, (Mimeo), 1983.

1990-91.¹³ This percentage does not appear to have changed much since 1977-78. However, the percentage share of SSEs in the value added in manufacturing as a whole is only about 30 percent,¹⁴ and their share in total manufactured exports is 27 percent.¹⁵

It appears that the secondary multiplier effects of investment in small-scale enterprises on output and employment are also relatively greater. For example, the available evidence shows that small-scale enterprises use locally manufactured machinery and equipment to a much greater extent than LSM enterprises.

Moreover, a significant proportion of SSEs are export oriented in the fields of apparel, leather products, surgical instruments, sports goods, carpets and wood working. Thus, small-scale industry, in a number of sectors, is both export-oriented and/or import substituting (where vending enterprises in the small-scale sector enable deletion programs in the large scale manufacturing sector).

IV.2.2 Strategic Objectives of the Growth of SSEs

The growth of SSEs needs to be not only accelerated substantially but also induced towards a geographic disposition that results in the emergence of SSE based growth nodes in the small rural towns of Pakistan. Such a process would enable a geographically diversified growth that is relatively cheap in terms of infrastructural investment and also oriented towards employment generation. These growth nodes of SSEs in small towns should be linked with the agriculture sector (producing farm implements and food processing) on the one hand, and with the Large Scale Manufacturing Sector (through sub-contracting of components manufacture) on the other. Such forward and backward linkages would enable both an increase in agricultural productivity and also a reduction in the import costs of the large scale-manufacturing sector. The objectives of rapid growth of SSEs would be four fold, (i) to help accelerate employment generation in the

¹³ M. Mahmood, cited in: ILO/SAAT, 1997 (Mimeo).

¹⁴ Ibid.

¹⁵ See Report of the Sub-Committee on Cottage Industries, Punjab, 1999.

off-farm sector in rural areas, (ii) to enable a regionally balanced industrial growth with relatively low infrastructural investment, (iii) SSEs in small rural towns would help slow down migration into large urban centres. Such enterprises require a relatively low infrastructure input and can provide skilled employment to the rural workforce close to their homes. (iv) To reduce the foreign exchange costs of large-scale industry through subcontracting components manufacture with domestic SSEs. At the same time given the relatively greater export orientation of SSEs with appropriate institutional support they can help alleviate balance of payments problems, (v) to increase value added and productivity of labour in the rural sector, and thereby improve the overall distribution of income.

IV.2.3 Constraints to the Rapid Growth of SSEs

Field visits to a large number of SSE units in the Punjab and NWFP during the last five years, have revealed that while their technical potential in many cases is high, the units are actually producing low value added items like steel shutters or car exhaust pipes, instead of components for LSM, or high quality farm implements. This results in low profitability, low savings and slow growth. The major constraints to accelerating growth of SSI's in small towns, may be identified as follows:

- i) Inability of small units to get orders for components manufacture from LSM and farm implements from agriculture.
- ii) Inability to achieve quality control and to meet tight delivery schedules.
- iii) Lack of specific skills like advanced millwork, metal fabrication, precision welding, all of which are needed for producing quality products with low tolerances and precise dimensional control. In other cases accounting and management skills may be inadequate.
- iv) Difficulty faced by small units in getting good quality raw materials, which often can only be ordered in bulk (for which the small entrepreneurs do not have the working capital).

- v) Absence of fabrication facilities such as forging, heat treatment and surface treatment, which are required to achieve dimensional precision for manufacture of high value added products, but are too expensive for any one small unit to set up.
- vi) Lack of credit facilities.

IV.2.4 Proposed Institutional Structure for Overcoming the Constraints: Industrial Support Centres (ISCs) at the Local Level, and Enabling Institutions at the National/Provincial Level

The Concept

The concept of the Industrial support Centres is based on the fact that small-scale industrialists in Pakistan have already demonstrated a high degree of entrepreneurship, flexibility, innovation and ability to work hard. The ISC would provide an opportunity for rapid growth to SSEs through a demand driven and decentralized support system, which ensures continuous easy access to a comprehensive package of support services such as credit, skill training, marketing, managerial advice and technical assistance. The ISC would also be linked up with the recently formed SMEDA, VTIs, national research centres, and donor agencies for drawing upon technical expertise, training and financial resources of these agencies in the service of SSEs.

Both the Punjab Small Industries Corporation (PSIC) and Sarhad Small Industries Corporation have a number of “Common Facilities Centres (CFCs) located near regional specific clusters of small scale enterprises. For example, PSIC has 13 CFCs in fields such as wood products, metal, leather and ceramics goods. However, these CFCs suffer from four problems which constrain their ability to perform an effective role in catalyzing SSEs: (a) their focus is almost entirely on providing specialized fabrication facilities, prototype development, and to a lesser extent, credit. They are not designed to provide marketing link-up with LSM for subcontracting jobs, or organizing unit clusters for diffusion and adoption of prototypes.¹⁶ (ii) Even their specialized fabrication facilities (which is their main focus) are in many cases obsolete and have failed to keep pace with

¹⁶ See Case Study on the CFC in Mian Channu, Punjab, Appendix 4. Also see Akmal Hussain and Omer Asghar Khan: PHMP Project Proposal for Phase II, SIDB, NWFP and D.G for International Cooperation, Netherlands.

changing market conditions and production techniques. This lack of technological dynamism and responsiveness to market conditions is due to the rigid structure within which government sponsored corporations' function.¹⁷ (iii) They are suffering from lack of systematic and continuous contact with clusters of SSE units near the CFCs, thereby constraining their ability to provide effective support. (iv) When faced with financial problems, they tend to start producing "prototypes" on a commercial scale, thereby becoming competitors of SSE cluster units rather than acting as support institutions.

Institutional Structure of ISCs

The ISC's should be located in specified growth nodes where a potential exists for major rural industrialization activities. It would be necessary to ensure that they are market driven, efficient and independent of patronage based pressures from bureaucrats and politicians. In the pursuit of this objective, it may be advisable to institute the ISCs as private limited companies with independent boards of directors. This initiative can be taken by the newly established Small and Medium Enterprise Development Authority (SMEDA) in collaboration with provincial governments, multilateral agencies and industry specific associations. SMEDA has included amongst its objectives the provision of catalytic institutional support in the light engineering sector of SMEs. However, it has yet to prepare a policy program for intervention in this sector. Since SMEDA is reporting directly to the Prime Minister and also has a competent set of professionals it has both the political and professional capability to undertake the initiative proposed in

Functions

The Industrial Support Centres would have the following functions:

- (i) Catalyzing the process of organizing industry specific organizations of SSEs in nearby clusters, and providing a support institution for marketing, quality control, technical facilities, prototype development and credit. The ISC would maintain continuous contact with members of associations to facilitate diffusion of ideas and prototypes as they are developed.

¹⁷ Report of the Sub-Committee on Cottage and Small Scale Industry in Punjab, 1999, Page 42.

- (ii) **Marketing:** Provision of orders from the large scale-manufacturing sector for components, and from farmers for farm implements. These orders would then be sub-contracted to the cluster of SSE units that the ISC is supposed to serve. The individual order would be sub-contracted to the SSI on the basis of the skills and potential strengths of the unit concerned.
- (iii) **Monitoring and Quality Control:** Having given the sub-contract, the ISC would then monitor the units closely and help pinpoint and overcome unit specific bottlenecks to the timely delivery and quality control of the manufactured products. These bottlenecks may be specialized skills, equipment, good quality raw material or credit.
- (iv) **Skill Training and Product Development:** The ISC would provide specialized supplementary skill training on its premises or in one of the new Vocational Training Institutes (VTIs) that are now emerging, to workers in the SSE units when required. At the same time, it would provide advice on jigs, fixtures, special tools and product development where required.
- (v) **Forging and Heat Treatment Facilities:** The ISC's would establish at their premises plants for forging, heat treatment and surface treatment. The SSI units could come to the ISC to get such fabrication done on the products they are manufacturing on sub-contract, and pay a mutually agreed price for this job to the ISC.
- (vi) **Credit:** The ISC would provide credit to the SSEs for purchase of new equipment and raw materials. This credit could be accessed from the recently formed SMEDA, Small Business Finance Corporation, and nationalized commercial banks who are currently developing special windows for credit to small and micro enterprises. In cases where raw materials are available in bulk supply, the ISC could buy it from the source, stock it on its premises and sell at a reasonable price to units as and when they need the raw materials. Alternatively, it could access raw materials as required from local branches of the proposed Raw Material Bank.

CONCLUSION

The analysis of agriculture growth in this paper suggests that there is a tendency for slower and unstable growth in the crop sector, which has been an important factor in rapidly increasing poverty and inequality in the rural areas during the 1990s. We have identified some of the structural constraints that underlie the declining growth rate of yields per acre and increased instability of growth. We have also indicated the policy framework within which these constraints can be addressed. We have proposed that the elite farmer strategy of the past needs to be replaced now with a small farmer strategy. At the same time we have proposed an institutional structure within which a rapid increase in incomes and employment of the poor could be achieved through micro enterprises and small scale industries in the rural sector. This could enable faster economic growth together with rapid poverty reduction and increased employment generation.

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