

Public Policy and Agricultural Transformation in Pakistan

MAHMOOD HASAN KHAN*

Successive governments in Pakistan have claimed that most of their policies were aimed at alleviating rural poverty and improving the income-earning capacity of "small" farmers. However, a close examination of almost all of the major policies seems to indicate that the beneficiaries have been mainly the large landowners and even traditional landlords. This paper will argue that by promoting policies favourable mainly to these groups governments have contributed to persistent income inequalities and rural poverty without raising the efficiency levels or increasing the tax revenues for the services needed by agriculture in general and the rural poor in particular. A major part of the argument will be that certain key policy options have not been used effectively and that the others that have been used are contradictory to the goals of maximizing efficiency, equity and revenues.

STATE OF AGRICULTURE AND RURAL POVERTY

Agriculture is still a major source of employment and income for a vast majority of the poor in Pakistan. Its performance has been uneven, in terms of both the rates of growth and commodity balances. Aggregate growth rates of agriculture show that the stagnation of the 1950s was followed by a robust growth in the 1960s. The growth process slowed down considerably in the early to the mid-1970s. A somewhat impressive revival has been an important aspect of economic change in Pakistan in the last seven to eight years [22].

The state of agriculture in recent years has improved particularly with respect to its terms of trade with other sectors in the economy. Government policies of price support, subsidies and taxes seem to have played an important role in helping the agricultural sector to receive a "fair" deal in the process of growth in the national economy [5]. This aspect will be explored further when we analyse the relevant policy instruments.

These optimistic indicators of the improved health of agriculture conceal several serious deficiencies.

1. The growth performance has not been shared equally even by the four major crops, viz. wheat, rice, cotton and sugar-cane. Wheat and rice have continued to show a stable growth in the yield levels, but cotton and sugar-cane have been subject to wide fluctuations. In fact, the sugar-cane yields have been stagnant or even falling. The yield levels of fodders and pulses have shown little change. The crisis of oil crops has yet to be resolved to save the foreign exchange used for importing edible oils.

2. The livestock sector is still highly fragmented and inefficient. The exception is the emergence of a somewhat well-organized poultry industry around major urban centres. A similar development is perhaps now under way in the dairy industry.

3. Regional disparity between irrigated and rain-fed areas is not only high but perhaps even increasing. Development of land-saving technology for increased yield levels has not been observed in the rain-fed areas simply because of lack of assured supply of water and adequate research funding.

4. Finally, and perhaps most importantly, the impact of growth on the various classes engaged in agriculture has been highly uneven. This aspect will be analysed in considerable detail because of the existing differentiation and asymmetrical relations observed in the countryside.

Poverty afflicts millions in Pakistan. Most of the poor live in rural areas, working on or around land. The rural poor are mostly in households of share-croppers and landless (casual) labourers. Landlessness is perhaps the most important indicator of rural poverty. Of course, there is considerable poverty even among the small owner-operators in the Punjab and the NWFP, particularly in the rain-fed regions.

There were about 10 million rural households, representing 60 million people, in Pakistan at the last agricultural census in 1980 [20]. Rural households do not now all depend on agriculture for their incomes. Over 6.5 million of them are "agricultural" households and the rest can be called "non-agricultural" households. Among the agricultural households, about two-thirds are *attached* to land as either owners or tenants, and the remaining one-third live as labourers with or without some heads of livestock. The land-owning households consist mostly of owner-operators; and the tenant households are mainly share-croppers. Small owner-operators — owning less than 2 hectares in the rain-fed regions — do not, however, own a large proportion of the area. Share-croppers cultivate land mainly for large landowners or landlords. Of the nearly 3.3 million non-agricultural households, about two million are working in agriculture-related activities as artisans, petty traders, etc. The remainder work outside agriculture as professionals, transporters, skilled workers, state employees, etc.

There are no consistent sets of data on rural poverty in Pakistan. As in many other countries, in Pakistan, too, there have been serious problems in defining poverty itself: should it be expressed in "relative" or "absolute" terms? Which of the various measures of absolute poverty should be used? Even if an aggregate measure of poverty has been estimated, can the poor be identified as distinct groups? A few estimates of poverty at the aggregate level seem to indicate that *about 30 to 40 percent of the rural households can be regarded as poor*. These studies also show that these magnitudes of rural poverty have changed by little in the 1970s [8; 13; 17].¹ There is also now some evidence on who the rural poor are. The most prominent and numerous among these groups are the landless agricultural workers and share-croppers, followed by small owner-operators. Share-croppers are the single largest group among the rural poor in Sind and in several regions of the Punjab as well. It is generally agreed that the poor households in rural Pakistan are mainly those of *landless* agricultural workers (including those who own a few heads of livestock), *landless* share-croppers and the *land-owning* small owner-operators [7].

Changes in the distribution of landownership and rural income are the two most important indicators of the level of, and changes in, rural poverty. In Table 1, the household data on land and income show that (a) landownership is far more concentrated than rural income and (b) the inequalities in both increased during the 1970s. The share of the bottom 40 percent of the rural households has fallen — from 11 to 10 percent in land and 22 to 21 percent in income — and the share of the top 20 percent has increased in both — from 55 to 57 percent in land and 40 to 41 percent in income. The middle 40 percent of the households have lost in land but gained slightly in income during the same period.

Policy Instruments in Agriculture

The question here is not whether governments should or should not play a role in the economy of Pakistan, particularly in its agricultural sector. The question rather is: *How well have they used the various policy instruments to promote efficiency and equity?* The analysis will focus on the following instruments of public policy.

1. Land reforms, including land redistribution and tenancy reforms;
2. Agricultural taxation, including land and income taxes;
3. Price support for major crops and subsidies for major farm inputs;
4. Agricultural credit institutions; and
5. Agricultural research and extension services.

¹ Estimates of rural poverty in Pakistan are: 35 percent of rural households in 1969-70 [17], 42 percent in 1971-72 [13], 28 percent in 1977 [8], and 31 percent in 1979 [8]. Khan [13] has classified the rural poor as (a) small landowning cultivators, (b) small landowner-tenants, (c) share-croppers, (d) landless farm workers, and (e) landless non-farm workers.

Table 1

*Household Distribution of Landownership and Rural Income in Pakistan,
1972 and 1980*

Decile of Rural Households	Percent of Land Owned		Percent of Rural Income	
	1972	1980	1972	1980
First	0.98	0.72	3.56	3.56
Second	2.24	1.66	5.36	4.95
Third	3.05	2.94	5.67	5.60
Fourth	4.53	4.36	7.43	6.50
Fifth	5.49	5.29	7.33	8.27
Sixth	8.32	7.81	9.04	8.32
Seventh	8.34	8.08	9.75	9.99
Eighth	12.13	12.02	11.61	11.64
Ninth	14.06	14.64	14.49	14.31
Tenth	40.86	42.48	25.76	26.86

Note: Data are compiled from [18 and 20] for land and [19] for income. Land records show that in 1976 one-quarter of the land area was held by about three-quarters of landowners with a holding of less than 2 hectares.

All of these instruments have been used in varying degrees by governments in Pakistan in the name of efficiency and equity. However, they have relied mainly on policies that have not forced structural changes in either the dichotomous and asymmetrical relations on land or distribution of income through extraction of surplus by direct taxation. Reliance on "softer" options have tended to reinforce income inequalities and rural poverty.

1. Land Reform Policies

There is little disagreement that at the time of creation of Pakistan in 1947 its agrarian structure was characterized by (i) a quasi-feudal landlord tenant nexus in most areas of Sind and the Punjab and (ii) a peasant system with fragmented (individual and joint) family farms in parts of the Punjab and the NWFP. Landownership was highly concentrated, particularly in Sind. However, the more numerous family farm owners in the Punjab and the NWFP did not own more than 55 percent of the total farm area. There is also some evidence that most of the land in Pakistan was then cultivated by share-croppers: about 50 percent of the area in the Punjab and the NWFP and over 70 percent in Sind. It should also be noted that while occupancy tenants – who had some legal rights on land – were

predominant in the first two provinces, tenants-at-will (*haris*) – who had no legally recognized rights – cultivated most of the land in Sind. Family farms – which were highly fragmented – did not occupy a significant proportion of the cultivated area.

The tenancy reforms of the 1950s, enacted in the three provinces, were nominal in that they had apparently no impact on contractual arrangements between landlords and share-croppers. The first visible pressure on landlords, particularly with large landholdings, came with the Land Reform Act of 1959. However, there is considerable evidence that it did not significantly alter the concentration of landownership, as there were substantial intrafamily land transfers and even evasion of the ceiling requirements on individual holding. The landless and near-landless peasants received little land. The Act of 1959 did not include changes in the traditional tenancy laws of the provinces.

The second land reform act was promulgated in 1972. It was seemingly more radical than the first one. While its impact on land redistribution has been far more limited in terms of the resumed area, its tenancy legislation has apparently had a favourable effect on the legal position of the share-croppers.

The third land reform act was announced in 1977, just before the imposition of Martial Law in the July of that year. There has been little or no redistribution of land in accordance with the Act of 1977. In fact, the federal government has made several amendments to the act since 1982 to encourage large-scale farming in Pakistan.

The three land reform acts have redistributed less than 1.5 million hectares of land to less than 290,000 beneficiaries. It should be remembered that a substantial part of the distributed land area was not of high quality. Secondly, not all beneficiaries have been the landless share-croppers; a high proportion of the beneficiaries in the Land Reform Act of 1959 were small owners. Landless agricultural workers have not been included in any list of beneficiaries. A more important aspect of these reforms has been the *absence of a follow-up support system*, including distribution of credit, inputs and establishment of either new or encouragement of the existing peasant organizations. There is ample evidence that a deliberate and systematic policy has been followed against organizations supporting small landowners, share-cropping tenants and landless workers.

In most regions of Sind and several areas of the Punjab and the NWFP, where large landowners (landlords) have a high share of the land area, a sharecropping (*batai*) system has evolved according to the political and economic conditions. The tenancy laws incorporated in the 1972 land reform act were meant to alleviate the subservient position of the tenant. Among other things, occupancy rights were expanded, arrangements of expense-sharing were clearly defined, and provisions were made for increased security to tenants on the lands they occupy. There are, however, several problems with the sharecropping system.

1. The conventional formula of equal shares in the gross produce under normal circumstances has not only been more favourable to the landowner, but the additional items of costs which the tenant must now share with landowners have imposed a new burden. This is particularly striking as some inputs, of which the cost must be equally shared, increase the capitalized (equity) value of land for the landowner — in which the labour of the tenant has been subsumed — and some inputs may even displace the tenant's own labour and that of his animals and further weaken his bargaining position. Use of fertilizers and tractors is an example.

2. While the risk is shared between the landowner and his tenant, all decisions about crops, use of inputs, etc., are entirely in the hands of the owner or his agent.

3. In several areas, at least of Sind, landlords rotate their tenants on different parcels of land, which keeps the tenant insecure and provides little or no incentive for him to improve land management. Also, the legal provision for the right of landowners to expand "self-cultivated" area can lead to the eviction of tenant or at least to a reduced land parcel and increased insecurity.

4. Notwithstanding the legal provisions for the tenant's rights, his bargaining position remains weak because of the high degree of land concentration among some individuals or households in a village, in which the dependence of cultivators is almost total on the amount of land made available for sharecropping by owners of large landed estates. A sharecropping system can thus prolong the subservient position of direct producers if land concentration remains high.

A fixed-rent tenancy would not suffer from these weaknesses. However, the lease system can only work to the benefit of both the parties if the lessee has access to the required resources to take all the risk himself and pay a fixed amount to the landowner at the end of each season or year. Most share-croppers or small land-owning tenants have no support system of credit and farm inputs to enter into a fixed-rent tenancy. Therefore, this tenancy in Pakistan is increasing only among the medium to large landowners who lease land parcels from those small or marginal landowners who cannot make a living by land alone and must supplement their income by securing employment elsewhere.

Agriculture in Pakistan has been undergoing a process of rapid structural changes with respect to farm size and tenancy relations. Some of these changes reflect the effects of the land reforms acts, but most of them are being brought about mainly by (a) population growth, (b) laws of inheritance, (c) forces of the market, and (d) government policies of support prices, subsidies, taxes and credit. Recent changes in land concentration, shown in Table 2, indicate several interesting features.

1. Concentration of landownership reduced only marginally in the 1970s, and the highest concentration is still in Sind. Small landowners (with less than 2 hectares) are preponderant in the Punjab (80 percent) and the NWFP (93 percent), but they own, respectively, only 36 and 55 percent of the area in the two provinces.

Table 2
Distribution of Landownership and Operational Holdings in Provinces of Pakistan,
1971-72 and 1980-81

Size of Farm/ Holdings (hectares)	Year	Landownership Holdings		Operational Holdings	
		Percent of Owners	Percent of Area	Percent of Farms	Percent of Area
Punjab					
Less than 2.0	1971-72	80.0	33.4	65.1	29.4
	1980-81	79.9	36.2	70.8	33.4
2.0— less than 20.0	1971-72	17.3	43.2	31.9	50.1
	1980-81	18.3	43.7	26.6	46.1
20.0 and over	1971-72	2.7	23.4	3.0	20.5
	1980-81	1.8	20.1	2.6	20.5
Sind					
Less than 2.0	1971-72	59.9	16.1	70.7	39.0
	1980-81	66.2	22.0	75.9	41.7
2.0— less than 20.0	1971-72	31.3	39.7	27.3	42.4
	1980-81	28.6	39.9	21.9	39.6
20.0 and over	1971-72	8.8	44.2	2.0	18.6
	1980-81	5.2	38.1	2.2	18.7
NWFP					
Less than 2.0	1971-72	90.7	51.4	83.7	36.3
	1980-81	92.5	55.2	87.1	41.6
2.0— less than 20.0	1971-72	8.3	30.5	13.5	31.2
	1980-81	6.8	30.4	11.2	30.6
20.0 and over	1971-72	1.0	18.1	2.8	32.5
	1980-81	0.7	14.3	1.7	27.8

Note: Landownership data are from records of Boards of Revenue of the provincial governments [13]. Data for operational holdings are compiled from [18 and 20]. The land concentration ratios (Gini coefficients) are as follows:

Province	Landownership Holdings		Operational Holdings	
	1971-72	1980-81	1971-72	1980-81
Punjab	0.50	0.47	0.48	0.50
Sind	0.57	0.53	0.44	0.46
NWFP	0.41	0.38	0.60	0.57

They comprise only two-thirds of all the landowners in Sind with less than one-quarter of the area. The large landowners (with more than 20 hectares) still own 38 percent of the area in Sind, 20 percent in the Punjab and 14 percent in the NWFP.

2. Access to land, as reflected in the distribution of operational holdings (farms), has become somewhat more restricted in the Punjab and Sind, but has increased slightly in the NWFP. However, it should be noted that access to land is less concentrated than landownership only in Sind, reflecting the dominance of a sharecropping system based on a landlord-tenant nexus. Owner-operated farms are most dominant in the NWFP which is followed by the Punjab in this respect. Changes in the distribution of farms and farm area in the 1970s show that (a) the share of large farms has remained unchanged in the Punjab and Sind but has somewhat decreased in the NWFP, and (b) the share of small farms has increased in all the provinces. It should also be pointed out that the average size of farms has increased only among the very large farms; the other sizes have remained almost unchanged.

3. Of course, not all landowners cultivate land, either their own or anyone else's, and not all cultivators own land. There are several kinds of tenancy arrangements on land for cultivation purposes, ranging from owner-operatorship (with family or hired labour) to sharecropping and leasing of land. Small farms are largely owner-operated and they have been increasing in numbers and area. Sharecropped farms are mainly in the range of 2–5 hectares, but they have declined sharply in number and area. Large farms, particularly the ones that are owner-operated, have been increasing impressively. The tendency away from sharecropping is also reflected in a significant reduction of the proportion of the tenant-operated area on farms of all sizes. A high percentage (nearly 75 percent) of the ownership holdings are operating all of their owned area. Even the large holdings dependent on tenants sharply reduced their tenant-operated area in the 1970s [18; 20].

In predominantly agrarian societies, the structure of landownership determines the manner in which land and labour are combined for production. It has in turn implications for the absolute and relative well-being of the rural population. Control of land confers upon the owners considerable economic and political power, particularly if landownership is highly concentrated. The inequity embedded in a dualistic agrarian structure not only reproduces rural poverty but is also highly inefficient in producing food and raw material for industrialization. Land reforms can be used to alter the existing and highly asymmetrical relations on land and alleviate the condition of the rural poor.

Land reforms can have serious impact on the processes that reproduce poverty. They are often expected to reverse or at least slow down these processes. On the other hand, these reforms can contribute significantly to a process of agricultural growth that creates affluence and poverty simultaneously. There is considerable evidence indicating these contradictory effects of land reforms in underdeveloped

countries. It should be emphasized that the long-term effects of reforms may not necessarily be the same as their immediate impact on the agrarian structure. The effects of a land reform programme depend on a host of factors. What specific objectives does it aim at achieving? How is it implemented? What are the follow-up policies that have been used? It is in exploring answers to these questions that links between land reforms, landlessness and rural poverty in a specific country may be discovered.

It is significant that no interest seems to have been shown by either governments or researchers in Pakistan in analysing the impact of the various land reform acts on new and old landowners and on sharecropping tenants with respect to production levels, incomes, employment structure, etc. There is not one micro-level study exploring these issues. Similarly, there are no studies, even anecdotal, of the impact of tenancy laws on contracts between tenants and landlords.

It is fair to say that the agrarian structure in Pakistan is highly differentiated, with asymmetrical relations between the landlord and his tenant, on the one hand, and between the large (capitalist) farmer and the contending marginal and small owner-operator, on the other. This biformity affects the outcomes of almost all interactions between the contending groups, be they in the market-place or in the public sector. Inequities in the economy and society, reflected in distributions of rural income and land, tend to persist mainly because of these asymmetries. There is also evidence that this land system is not conducive to efficiency in agriculture: large farms are not more efficient users of society's resources than small farms, and sharecropped (small) farms are not better performers than owner-operated (small) farms [3; 11; 15].

The basic agrarian problem for public policy in Pakistan is still to radically alter the existing land tenure system. The case is argued with substantial evidence on

- (i) high concentration of ownership and use of land;
- (ii) landlessness and near-landlessness of a large and increasing proportion of peasants;
- (iii) wide differences in productivity and income between farms by size and tenancy;
- (iv) biformity in the input and output markets because of the rigid structure of accessibility based on landholding, thus neutralizing the positive effects of public policies on taxes, price support, subsidies, credit and agricultural research and extension; and
- (v) cumulative tendency towards increasing income disparities and exclusive participation in the development process.

The argument for a radical restructuring of the land system in Pakistan is then based on efficiency and equity. The disequilibrating effects of new technology,

increasing specialization and division of labour are becoming quite evident on the weakened position of small landowners, landless share-croppers and wage workers.

2. Agricultural Taxation

The structure of direct taxes in agriculture can not only affect the ownership and use of land and the distribution of rural incomes, but also provide investible surplus to the government for the development of agriculture and improvement in rural life. There is at present only one form of direct tax on agriculture in Pakistan. It is called the land revenue. There is no tax on agricultural incomes. The land revenue system is ancient and rigid. Its tax base has not expanded with changes in agricultural production and income. Since the introduction of *ushr* on agricultural output in 1983, land revenue collections have contracted and the *ushr* revenue is not available to the public sector for developmental work.

Governments have resorted to taxing agriculture indirectly as a soft option to the restructuring of the land tax. Several forms of explicit and implicit indirect taxes, which have had few if any positive effects on efficiency and equity, have been imposed on agriculture. The dependence on a variety of indirect taxes is a sad reflection of the failure of governments to make taxes flexible and progressive. Governments have allowed transfer of agricultural surplus to other sectors without at the same time returning to agriculture and rural community the benefits of investible resources for their own development and well-being. Furthermore, public policy in the agricultural sector has helped only certain groups to appropriate the benefits of growth without using the fiscal instruments to redistribute these gains.

The rigid tax structure of the land revenue system is reflected in the several indicators shown in Table 3. It has been producing largely an unchanging amount of revenue in the provinces, except in two to three years in the late 1970s when the collections rose because of *ad hoc* increases in the rates of land tax. The reduced collections in 1983-84 reflect the introduction of *ushr* from the Rabi of 1982-83. Then, again, since the total provincial taxes and the national value added in agriculture have been rising, the share of direct agricultural tax has fallen quite sharply over time: the ratio of land tax to provincial tax revenues fell from about 7 percent in 1974-75 to 1.0 percent in 1983-84 and the ratio of land revenue to gross value added in agriculture fell from 0.8 percent to 0.2 percent in the same period. Finally, provincial governments have been collecting only Rs. 8-12 per cropped hectare. In other words, a landowner pays a tax not exceeding 0.5 percent of the gross value per hectare! Of course, there are wide differences in the incidence of land revenue per cropped hectare between the provinces: the highest is still in Sind which is followed by the Punjab and the NWFP.

Another serious aspect of the land revenue system, at least until 1977, was that the revenue collected per unit of cropped land did not vary with the size of an

Table 3

Land Revenue Collections in Pakistan, 1975 and 1984

Year	Land Revenue (. in Million Rupees)	Provincial Tax Revenue	Gross Value of all Crops (.)	Ratio of 2 and 3 (Percent)	Ratio of 2 and 4 (Percent)	Ratio of Land Revenue to Cropped Area (Rs /Hectare)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1974-75	183	2,705	23,271	6.8	0.8	10.54
1975-76	187	4,075	26,602	4.6	0.7	10.38
1976-77	141	4,442	29,447	3.2	0.5	7.74
1977-78	178	4,973	34,516	3.6	0.5	9.63
1978-79	231	5,764	39,322	4.0	0.6	11.97
1979-80	169	7,386	44,765	2.3	0.4	8.79
1980-81	241	10,982	49,408	2.2	0.5	12.47
1981-82	230	11,869	57,601	1.9	0.4	11.63
1982-83	189	12,531	62,422	1.0	0.3	9.40
1983-84	143	14,082	61,202	1.0	0.2	7.04

Note: Data are compiled from [21] and [22].

owner's landholding. However, the basic exemption of revenue for holdings of less than 5 hectare since then has induced landowners to alter land records to reduce the size of the individual holding. A surcharge, called "agricultural income tax", brings Rs 3-5 million per year with the land revenue. The small amount of collections is due to the fact that the surcharge is not imposed on those landowners who pay land revenue of less than Rs 250 in the Punjab and Rs 450 in Sind. Since there are not too many landowners who pay more than Rs 500, the total amount of surcharge has remained largely insignificant.

The exclusion of agricultural income from tax poses three serious problems: (a) it limits opportunities for the mobilization of domestic resources for development expenditure; (b) it maintains inequities between the agricultural and non-agricultural sectors and within the agricultural sector; and (c) it introduces inefficiency in the tax system of the country. The welfare cost of not taxing agricultural income would be reflected in capital not moving to activities where it is more productive because taxpayers are concerned with the after-tax returns rather than with gross returns [9]. Exemption of agricultural income from tax, subsidies for credit and farm inputs, and tax holiday on investment in agriculture are attracting capital from urban areas into land. Given a lower marginal productivity of capital in agriculture than in industry, the cost to the society is in the form of lost output.

The land revenue system is a tragic anachronism, maintained by the tenacity of the landed interests and supported by the existing revenue administration. The interest of landlords in maintaining a largely regressive tax structure, in which their lands and incomes enjoy special treatment, needs no demonstration. These interests have been expressed with force in almost all official committees and they have so far been guarded by governments. The civil service associated with the administration of land revenue, almost without exception, has on every occasion supported the position of the landed interests. The revenue officials have helped these interests by pleading that the agricultural sector deserves a "special treatment" for direct taxation. They appear to be pleading for all groups in agriculture as if the present tax structure is efficient and equitable. In reality, they are successfully defending the wealth and income positions of a minority of landowners and farmers who are not necessarily the most efficient agents of agricultural production. However, their influence on public policy is reflected in the fact that the Finance Act of 1977, replacing land revenue by a tax on agricultural income, was aborted after the imposition of Martial Law in 1977.

There is now considerable evidence that the burden of indirect taxes on agriculture has been falling, thanks to the abolition of export taxes and increased support prices for major crops, and the terms of trade have moved in favour of agricultural producers [5]. Secondly, how long can the society bear the welfare costs of a policy based on the "infant industry" argument that is no longer valid for increasing agricultural productivity. Finally, there are the persistent, if not increasing, inequalities of landownership and rural income. Therefore, the present land tax should be replaced by an efficient and equitable direct tax on agricultural income [11; 13]. The new tax system should take into account at least the following considerations:

- (i) it should be a rational instrument with which the State may be able to mobilize investible resources from agriculture to help develop the much needed infrastructure in rural and urban areas;
- (ii) it should be based on the principle of the ability to pay, maintaining a measure of equity within agriculture;
- (iii) it should be responsive to changes in incomes, prices and output; and
- (iv) it should be administered without imposing unbearable economic and political costs.

Introduction of direct and progressive tax on agricultural incomes will not only introduce the much-needed elements of efficiency and equity, but will also significantly increase government revenues without the government having to resort to explicit and implicit taxes that are both unfair and socially inefficient. There is an additional argument for direct taxation in agriculture, for it also provides a politically feasible alternative to a radical redistribution of land

3. Price Support and Subsidies

Government intervention in the pricing of major crops and farm inputs has been one of the most important instruments of taxing and subsidizing agriculture in Pakistan since at least the early 1960s. The policy of support prices for major crops (wheat, rice, cotton and sugar-cane) and subsidies on prices of farm inputs, particularly fertilizer and water, has been premised on the argument of incentives to farmers to raise farm productivity. There are several interesting aspects of this policy that need examining here.

Firstly, it is significant that the terms of trade for agriculture have improved in the last seven to eight years. This is indicated by increased purchasing power of farmers, whether measured in terms of the quantity of output or in those of productive effect. It can thus be argued that the farmers' ability to pay for farm inputs has not been eroded even with the recent reduction in subsidies. This is also reflected in the evidence on increased net returns per hectare in the 1970s. One of the major reasons for this has been the increases in the procurement prices of the principal crops [5].

Secondly, support prices for major crops have been rising significantly, particularly since the late 1970s. The procurement price of wheat has almost doubled, the price of rice has been raised by 50 percent, the cotton price has gone up by about 40 percent, and the sugar-cane price has risen by over 50 percent. What is even more important is that the ratios of the procurement prices of major crops to the prices of farm inputs have not moved adversely, and the ratio of domestic prices to international prices of these crops has improved. In fact, cotton prices are now very closely aligned; and the domestic price of sugar far exceeds its international price [5].

Thirdly, as shown in Table 4, the total amount of subsidy on farm inputs has increased significantly after 1977, maintaining a level of Rs. 2.5 billion to Rs. 3.0 billion. It has absorbed about 8–16 percent of the total development expenditure of the federal and provincial governments. The lion's share, nearly three-quarters, of the subsidy on farm inputs has gone to fertilizer, followed by irrigation water and pesticides. Subsidy on pesticides was eliminated in 1981 and the fertilizer subsidy is expected to be removed this year. The subsidy on irrigation water has been rising, even though the water rates have increased in recent years.

The issue of price support and subsidies has engendered a number of controversies. One thing can be said in the context of Pakistan. A price support policy, with sensitivity to changes in domestic resource cost and international prices of major crops, should be the only instrument to enable farmers to get a "fair" return for their effort. Subsidies on farm inputs, even if they had a credible case in the past, should be eliminated completely, particularly on canal water, fertilizer and machinery (tubewells and tractors). This argument will be developed following a discussion of the price support policy.

Table 4

Agricultural Subsidies in Pakistan, 1975 and 1984

Year	Plant Pro-				Net Irri- gation Cost	Total Subsi- dies	Develop- ment Expendi- ture	Ratio of Subsidies to Ex- pendi- ture (Percent)
	Ferti- lizer (. in Million Rupees)	tec- tion	Wheat Seeds	Tube- wells				
1974-75	326	112	6	16	61	521	10,734	4.9
1975-76	607	381	6	24	146	1,164	12,366	9.4
1976-77	381	485	6	48	166	1,086	15,038	7.2
1977-78	617	523	25	20	121	1,306	15,353	8.5
1978-79	1,692	267	8	24	231	2,222	18,494	12.0
1979-80	2,454	218	29	22	361	3,084	19,082	16.2
1980-81	2,457	—	2	20	578	3,057	23,321	13.1
1981-82	1,794	—	8	24	750	2,576	24,643	10.5
1982-83	1,948	—	8	24	727	2,707	29,833	9.1
1983-84	1,720	—	—	16	700	2,436	29,264	8.3

Note: Net Irrigation Cost is the difference between the operation and maintenance cost of the irrigation system and revenue collected from water users. Development expenditure is of both federal and provincial governments. Figures for 1983-84 are estimates. Data are compiled from [22, Table 8.4, pp. 102-3 and 5, Table 11, p. 25].

Table 5

Distribution of Cultivated and Cropped Area by Farm Size in Pakistan, 1980

Farm Size (hectares)	Percent of Cultivated Area	Percent of Cropped Area	Percent Share	
			of Major Crops in Cropped Area	Cropping Intensity
Less than 2.0	8	9	63	147
2.0 to less than 10.0	56	58	66	130
10.0 to less than 60.0	30	28	57	111
60.0 and over	6	5	59	100

Note: Data are compiled from [20].

Price support for major crops can give farmers a fair deal through its effect on their incomes and provide stability to the prices in the market-place. A major advantage of reliance on a price support system will be the likely distribution of benefits between large and small farmers. Small farms, as shown in Table 5, account for about two-thirds to three-quarters of the cropped area of the major crops and their cropping intensity is 30 – 40 percent higher than that of large farms. Consequently, a price incentive would tend to affect the small farmers more favourably. The only problem here is the observed difference in the marketable surplus of grains between large and small farms. The evidence of lower marketable surplus on small farms, given in Table 6, reflects partly the subsistence requirements of these households. It also indicates the problems the small farmers usually face in marketing their grain crops even through the government procurement centres [6]. The emphasis of the government policy should be on alleviating the marketing and storage problems of the small farmers in order to encourage them to sell higher proportions of their output of grains. This policy ties in well with the gains in terms of the larger output that the small farmers would be able to provide to consumers at reduced unit cost.

A price support system can work only if governments are aware of and sensitive to changes in the factors that affect prices in markets both at home and abroad. Among these factors, the most important are (a) domestic resource costs or crop parity ratios, (b) border or international prices, (c) relative prices of major farm inputs and manufactured goods, (d) domestic demand conditions, and (e) marginal cost of crop production under various farming systems and areas. It is a long agenda, but without taking these factors into account, government intervention may tend to distort the incentives for efficiency and equity. The research needs are equally great, as little has so far been done in Pakistan. It is encouraging that the Agricultural Prices Commission has undertaken some studies either directly or

Table 6

Distribution of Marketable Surplus by Farm Size in Pakistan, 1983

Farm Size (hectares)	Percentage of Total Output in Markets				
	Wheat	Rice	Maize	Cotton	Sugar-cane
Less than 5.0	28	50	20	91	99
5.0 to less than 10.0	60	88	35	98	99
10.0 and over	78	98	59	98	95

Note: Data are compiled from [25, Table III-2].

through other institutions. Results of well-conducted studies can present reasonable options to policy-makers to use in the political process by which support prices are in the end determined.

The other area of concern for an effective price support system is that of institutional support to facilitate the disposal of agricultural surplus, particularly that of small farmers. Governments should pay attention to the development of a decentralized storage system which is accessible to the farmers with small amounts of surplus. While the public sector may develop large-scale and strategically located storage facilities, it is necessary to encourage private groups (traders and the like) to construct small-scale storage that is available to small farmers at reasonable cost. Finally, the marketing intelligence services should be expanded and more closely integrated with the market committees at all levels. Participation of direct producers needs far more attention than it now receives.

One of the arguments often presented against reliance on a price support policy as a substitute for subsidies on inputs has been that the former is likely to raise directly the prices of food and raw material paid by urban consumers and the growing industrial sector. The experience in Pakistan shows that support prices of almost all major crops have been below their domestic resource cost or border prices. Urban consumers of grains, particularly of wheat, have been protected through a rationing system. In fact, it can be argued that all poor consumers, rural and urban, can be subsidized through some kind of a rationing system, implying a subsidy considerably smaller than the amount of subsidy being given to farmers on inputs. A wheat rationing system for the poor households may be one of the few ways to protect their real incomes [6; 24]. What is perhaps more significant is that increased agricultural production through price incentive may allow termination of consumer subsidy and release state revenues for transfer to the poor through improved services in urban and rural areas. The industrial sector, as user of raw material, needs no protection as long as the prices of raw material do not exceed their opportunity cost or the border price. It is unreasonable to tax raw material producers through low prices, when the industrial producers have been protected so well through taxes, subsidies and exchange rates.

The case against subsidies on farm inputs is based on several arguments. For one thing, there is considerable evidence that since access to major farm inputs is dependent on the size of landholding, there has been a definite discrimination between small and large farmers in the distribution of subsidies on inputs and the consequent incomes they help to produce. Also, there is evidence that the use of many of the so-called modern inputs is higher on large farms than on small farms, although there is no equally credible evidence that large farms are more efficient users of these inputs. This has been certainly true of fertilizer, pesticides and farm machinery [20].

Secondly, there is evidence that the price elasticity of demand for some inputs (water and fertilizer) is quite low. Thus, their negative price effect is more than offset by the positive income effect. The positive income effect of fertilizer and water has been demonstrated by the continued profitability of the use of these inputs [5].

Thirdly, subsidy on certain inputs not only encourages waste of a scarce factor (water), but also leads to substitution of other inputs that may have a negative impact on income and employment, offsetting the private profitability of the subsidized input. This argument is clearly relevant and strong in the observed substitution of labour by machines.

Fourthly, the cost of certain inputs, like water and fertilizer, even without a price subsidy, may be a very small proportion of the total cost of production of crops per hectare. Removal of subsidy would put little additional burden on the total cost. What is even more important is that the cost of fertilizer and water and some other inputs is demonstrably lower than the value added by them per unit with support prices for crops [5].

Finally, reduced subsidies in the economy would release substantial financial resources to be used for improving services to farmers, e.g. maintenance and operation of watercourses, provision of research and extension services, and expansion of institutional credit.

The principle of charging user cost of major inputs from farmers can thus be defended on the following grounds:

- (i) distributional impact of subsidies is highly skewed;
- (ii) farmers are fully aware of the benefits of water and fertilizer, and increased charges are not likely to affect aggregate production;
- (iii) some subsidized inputs misallocate resources, with negative effects on aggregate production and employment; and
- (iv) subsidies tend to lead to wastage of scarce resources, particularly by the less efficient users.

4. Agricultural Credit

Public provision of farm credit can be an important instrument for improving production and income of the small farmers and the landless. However, it rarely works this way in most countries, and Pakistan is no exception. While the indebtedness of the rural poor is proverbial, there is usually underreporting of debt by most households, and it is particularly noticed amongst share-croppers whose relationship with their landlords almost always involves significant borrowing. Most households borrow from relatives and friends and are often unwilling to reveal their debt to those sources. There is evidence that small farmers and the landless borrow from non-institutional sources, including relatives and friends, money-lenders, landlords,

commission agents and traders [20]. Also, there is evidence that the interest rates paid on loans from these sources are considerably higher than those paid on loans from institutional sources. The low-income rural households borrow mostly for current cash requirements of production and consumption. In fact, small farms (less than 5 hectares) make few investments: their share is less than one-quarter of all agricultural investments. Their limited investments are from their own resources, because they reportedly borrow no more than 35 percent of their investments.² This, of course, reflects the limitation of their demand for credit by their ability to pay for it.

Institutional credit in Pakistan is not demand-oriented: like most other inputs and services it is constrained or rationed by supply. There are no estimates of demand for farm credit, based on rate of return, level of technology, financial constraints, etc. Since the cost of institutional credit is relatively low, there is excess demand for it. A bias in favour of large farms is built into the institutional credit system because of considerations of (a) risk minimization through collateral requirement, (b) low administrative cost and convenience and (c) the power and influence of large landowners. A close examination of the lending policies and disbursements of credit by institutions shows that these problems militate against small farmers in general and the landless in particular. Share-croppers have no direct access to institutional credit. Their major source is their landlord, and he also works as a conduit for seasonal loans from institutional sources. The other landless groups must depend entirely on non-institutional credit sources. The high cost of and limited access to credit thus prevent the rural poor from expanding their income-earning capacity.

The growth of institutional credit in Pakistan has been impressive in the last decade, rising from about Rs. 1 billion to Rs. 9 billion [22]. However, most of the loan money still flows to those who own substantial land or can give similar collateral as personal security. Institutional credit is not directed to meeting the consumption needs of rural households, although some of it gets channelled into consumption. This was observed particularly in the early to mid-1970s, when commercial banks began to extend loans to "farmers". Production requirements of farmers are the major focus of the public credit system. However, it excludes borrowing for purchase or mortgage of land.

Development or investment lending is done almost exclusively by the Agricultural Development Bank of Pakistan (or ADBP). It is allocated nearly one-third of the total public lending. The lending programme of the ADBP is dominated by loans for tractors, tubewells, and minor irrigation and agro-industrial ventures in

² Small farmers' share in all farm investments is less than one-quarter. Most of their investment is in conventional implements and tools, animals and related equipment [20].

the private sector. As shown in Table 7, small farmers get less than one-fifth of its loans. The number of beneficiaries is limited to a few thousands. Landless workers and share-croppers without collateral are not eligible for credit. The mobile credit scheme of the ADBP has apparently increased the lending for new and even innovative enterprises. It has also helped somewhat in increasing the recovery rates, from 75 percent to over 80 percent. It is significant that small farmers are better borrowers than large landowners in this respect.

Table 7
*Distribution of Loans by Agricultural Development Bank of Pakistan
by Farm Size in Pakistan, 1982-83*

Ownership Status	Amount in Million Rs	Percentage Share
1. Landowners:		
up to 5.0 hectares	463.74	20.1
over 5.0 to 10.0	800.48	34.6
over 10.0 to 20.0	512.30	22.2
over 20.0	342.52	14.8
2. Non-Landowners	191.40	8.3

Note: The loans to non-landowners are to corporate bodies or individuals for agro-industries, poultry, etc. Data are compiled from [1].

Public sector lending for the purchase of current or seasonal inputs, like seeds, fertilizer, pesticides, etc., is done through the co-operative and commercial banks. The co-operative banking system is still very weak in Pakistan in terms of its ability to extend loans to small farmers, to recover these loans and to manage its affairs efficiently. The absence of multi-level societies and the dominance of public (provincial) bureaucracy do not allow participation of small farmers in the system. Consequently, large farmers tend to dominate at the apex level of the co-operative organization.

Commercial banks were inducted into the farming sector in 1973, and they now account for about 45 percent of the total farm loans. Lending by these banks is also apparently mainly to large farmers. It works in their favour in several ways. The required quotas of loans for farmers by the size of the landholding are circumvented by considerable "proxy" lending, particularly through sharecropping tenants to landlords. This has become perhaps more significant after the introduction of interest-free seasonal loans intended for small farm operators. Similarly, the transaction costs of obtaining the "pass book", introduced in 1973, are quite different,

depending on one's holding or degree of influence on the local bureaucracy. The result is that a very low proportion of small farmers have obtained the pass books, whereas most of the large landowners possess them.

The observed duality in the rural money market of Pakistan is a reflection of its dualistic agrarian structure. A substantial subsidy implied in public loans for agricultural production is transferred to a small number of large landowners or operators. There are several policy options necessary to reduce the imbalance and increase the flow of credit to small farmers, including the landless tenants and farm workers.

Firstly, the ADBP should lower its land ceiling requirement to define a small farmer. It should also shift its emphasis from tractors to small loans with a large portfolio:

- (i) loans to purchase farm implements and improve farm structures;
- (ii) loans for tractor hiring services for land levelling;
- (iii) loans for additional heads of livestock for dairy products and meat;
- (iv) loans to the landless for livestock and similar ventures in rural areas.

Secondly, the mobile credit scheme of the ADBP and the supervised credit programmes of commercial banks should be integrated with the research and extension services to introduce and expand well-tested packages of technology.

Thirdly, it is necessary to strengthen effective monitoring and evaluation programmes in the banking system to reduce wastage and avoid misallocation of resources. The banking system has so far resisted these programmes or allowed their nominal existence.

Finally, and perhaps most importantly, the intended beneficiaries should be helped and not discouraged to form somewhat homogeneous and formal groupings or associations for activity planning, loan appraisal, credit delivery and even group saving schemes. These associations can be used for a group security system to help individual members in obtaining loans for production, livestock, etc. They can also act as watchdogs and help to improve the effectiveness of public lending institutions.

The links between credit and rural welfare are strong but complex. There are many questions that Pakistani researchers need to explore in order to understand the impact of public policy on credit. For example, what is the nature of the linkage between borrowers and non-institutional lenders, particularly the links between the tenant and his landlord and between the small farmer and the money-lender or trader? What are the factors that play a dominant role in determining the demand for credit by the rural poor? How does farm credit affect adoption and use of various packages of technology? And so on. The Pakistani literature on farm credit is woefully inadequate and cannot yield meaningful responses to these questions.

5. Agricultural Research and Extension

The share of agriculture in the development plans of Pakistan has fallen from about 10 percent in the first five-year plan to 4 percent in the sixth plan (Table 8). The share of agricultural research and extension in the development budget of agriculture has risen from about 8 percent to 20 percent in the same period. The significant fact is that Pakistan spends for research and extension only one-quarter of one percent of its Gross Domestic Product and only one percent of the Gross Value of Agricultural Output. Put differently, in the early 1980s the average spending on these activities was Rs. 100 per farm (Rs. 30 for research and Rs. 70 for extension) and Rs. 20 per cultivated hectare (Rs. 6 for research and Rs. 14 for extension). These expenditures make Pakistan amongst the lowest spenders in the Third World. Several studies have shown that most countries, irrespective of their state of development, have high returns on expenditures on agricultural research and extension. The real rate of return in Pakistan varies from 15 to 60 percent.

Table 8

Allocation of Public Investment to Agriculture in the Five Year Plans of Pakistan

Sector	Percentage Allocation					
	First Plan 1955-60	Second Plan 1960-65	Third Plan 1965-70	Non-Plan Period 1970-77	Fifth Plan 1978-83	Sixth Plan 1983-88
1. Agriculture	9.5	6.6	6.2	5.5	4.2	4.2
2. Fertilizer Subsidy	—	1.9	4.2	3.1	5.6	0.6
3. Total (1+2)	9.5	8.5	10.4	8.6	9.8	4.8
4. Water	19.9	43.3	34.2	17.0	10.1	10.8
5. Agriculture and Water	29.4	51.8	44.6	25.6	19.9	15.6

Note: Data are compiled from [23].

Traditionally, agricultural education, research and extension services have been funded through and administered by provincial governments. The federal government has played its role mainly in distributing resources and co-ordinating these

activities at the national level. However, the rapid expansion of funding for agricultural research since the late 1970s has created serious contradictions in the national research effort. The Pakistan Agricultural Research Council PARC — which was established only as a federal co-ordinating agency for research in the provinces — has acquired increasing resources for and control of agricultural research to which the provincial institutes have little access to improve their own research activities. In fact, a distinct duality has developed in the working conditions, rewards, etc., leading to a drain of researchers from provinces to the PARC. The increasing centralization of agricultural research at the PARC and its emerging elitism are not sensible or economic solutions of the acute regional problems of quality research in provincial institutions.

The other problem of agricultural research is that the emphasis is still on traditional questions about major crops. There is apparently little appreciation of “adaptive” research, emphasizing the development of technology packages that respond to the specific needs of various farming regions and the sizes and tenures of landholdings. What is equally important is that agronomic research has not been integrated with the economics of potential demanders of new technology. There is serious deficiency in the study of economic aspects of agriculture under different soil and water conditions, crop mixes, farm sizes and tenures. The present approach to fill this gap is again premised on increased centralization of resources and personnel at the PARC. The provincial research institutes do not have even a nominal existence of agricultural economists on their staff. Most of the research in agricultural economics rests with individuals outside these institutions, either in universities or other autonomous institutes.

The impact of research on agricultural production and rural welfare depends on how well farmers, as prospective demanders, benefit from it. This in turn would depend on the integration of agricultural research with the extension system. The concept of adaptive research requires a high degree of integration between these services in carrying to farmers profitable packages of technology etc. The extension system has to act not only as a conveyer belt between researchers and farmers, but also as a catalyst for adoption of new techniques by the farmers with small means and low incomes. A targeted extension network with strong links with research institutes has to be developed to achieve these objectives.

Agricultural extension services in Pakistan are still based on the notion that a cadre of agents with some general knowledge about agricultural sciences can help the farmers to improve their production. There are at least two serious problems with this approach. One, it has allowed a proliferation of frontline workers (called field assistants) with poor training, limited mobility and low reward for good work. The provincial agricultural extension departments seem to have become a refuge for a large number of young high school graduates with little prospect for growth in their careers or service to the farming community. Two, these workers and their supervisors (called agricultural assistants) must often concentrate their best efforts on

reaching the influential and well-off farmers. This is partly the duality problem that for economy and convenience every public sector service accommodates at the expense of the small or poor farmers.

The training and visit (T and V) method introduced in some districts of the Punjab and Sind in the early 1980s has so far produced no evidence of its alleged superiority over the conventional extension methods. Perhaps one of the important factors constraining its work has been a lack of commitment to resources and training of personnel. The adaptive research technique integrated with the T and V extension system seems quite attractive, but its impact on farmers will depend on two major factors.

Firstly, there should be a shift from a reliance on a large number of poorly trained frontline workers (field assistants), with little motivation, to a core of well-trained extension agents (agricultural assistants) formed in teams and linked closely to the research system. Here, the role of subject specialists is central to the success of the research-extension nexus, because these specialists can provide a constant and stable flow of the relevant research to extension agents and farmers. The emphasis on competent and specialized knowledge, of course, would be equally helpful in improving the low standards of teaching and training observed today.

Secondly, it is imperative that farmers, particularly those who need good quality service and do not at present get it, should be organized into formal groups or associations to take advantage of the specialized and integrated approach to technology transfer. The formation of these groups will not only yield economies of scale, and hence save considerable resources, but will also encourage participation of small operators. At present, sharecropping tenants and small owner-operators have little, if any, direct access to quality extension service. As individuals, they are dependent on a system which reinforces duality. As members of relatively homogeneous groups, they can exercise far greater influence on the system that now excludes them as individuals.

CONCLUDING REMARKS

The process of development is not about marginal adjustments; it usually involves deep structural changes. These changes, at least initially, rarely come from reliance on markets. Public policy plays a dominant role in creating new structures and organization that may help or hinder development. In societies with highly differentiated agrarian structures, low levels of productivity and high income inequalities, State intervention can exacerbate these conditions without major readjustments in agrarian relations, taxes and the like. These adjustments are the necessary conditions for realizing the positive impact of policies about support prices, input subsidies, credit, etc. Pakistani governments do not seem to agree with this proposition. They have relied instead on policies which have largely excluded the option of structural change. This paper has attempted to demonstrate some of the serious consequences of their policies on agriculture in Pakistan.

REFERENCES

1. Agricultural Development Bank of Pakistan. *Annual Report 1982-83*. Islamabad.
2. Berry, R. A., and W. R. Cline. *Agrarian Structure and Productivity in Developing Countries*. Baltimore: The Johns Hopkins University Press. 1979.
3. Chaudhry, M. G. "Green Revolution and Redistribution of Rural Incomes: Pakistan's Experience". *Pakistan Development Review*. Vol. XXI, No. 3. Autumn 1982.
4. Cheema, A. A., and M. H. Malik. "Consumption and Employment Effects of Income Redistribution in Pakistan". *Pakistan Development Review*. Vol. XXIII, Nos. 2&3. Summer-Autumn 1984.
5. Cheong, Kee-Cheok, and E. H. D'Silva. *Prices, Terms of Trade, and the Role of Government in Pakistan's Agriculture*. Washington, D.C. April 1984. (World Bank Staff Working Paper No. 643)
6. Cornelisse, P. A., and Syed Nawab Haider Naqvi. *The Anatomy of the Wheat Market in Pakistan*. Rotterdam: Erasmus University, Islamabad: Pakistan Institute of Development Economics. October 1984.
7. Ercelawn, A. "Income Inequality in Rural Pakistan: A Study of Sample Villages". *Pakistan Journal of Applied Economics*. Vol. XXIII, No. 1. Spring 1984.
8. Irfan, M., and R. Amjad. "Poverty in Rural Pakistan". In A. R. Khan and E. Lee (eds.), *Poverty in Rural Asia*. Bangkok: ILO/ARTEP. 1984.
9. Jetha, N., S. Akhtar and G. Rao. *Domestic Resource Mobilization in Pakistan: Selected Issues*. Washington, D.C. February 1984. (World Bank Staff Working Paper No. 632)
10. Khan, M. H. "The Political Economy of Agricultural Research in Pakistan". *Pakistan Development Review*. Vol. XX, No. 2. Summer 1981.
11. Khan, M. H. *Underdevelopment and Agrarian Structure in Pakistan*. Boulder, Colorado: Westview Press. 1981.
12. Khan, M. H. "Green Revolution and Redistribution of Rural Incomes: Pakistan's Experience - A Comment". *Pakistan Development Review*. Vol. XXII, No. 1. Spring 1983.
13. Khan, M. H. "Policy Options on Rural Poverty in Pakistan". A Report to Pakistan Planning Commission, June 1983. (Mimeographed)
14. Khan, M. H. "Classes and Agrarian Transition in Pakistan". *Pakistan Development Review*. Vol. XXII, No. 3. Autumn 1983.
15. Mahmood, M., and Nadeem-ul-Haque. "Farm Size and Productivity Revisited". *Pakistan Development Review*. Vol. XX, No. 2. Summer 1981.
16. Mahmood, Zafar. "Income Inequality in Pakistan: An Analysis of Existing Evidence". *Pakistan Development Review*. Vol. XXIII, Nos. 2&3. Summer-Autumn 1984.
17. Mujahid, G. B. S. "A Note on Measurement of Poverty and Income Inequalities in Pakistan: Some Observations on Methodology". *Pakistan Development Review*. Vol. XVII, No. 3. Autumn 1978.
18. Pakistan. Agricultural Census Organisation. *Pakistan Census of Agriculture 1972*. Vol. 1. Lahore. 1976.
19. Pakistan. Agricultural Census Organization. *Pakistan Census of Agriculture 1980*. Vol. 1. Lahore. 1983.
20. Pakistan. Federal Bureau of Statistics. *Household Income and Expenditure Survey 1971-72 [and 1979]*. Karachi.
21. Pakistan. Federal Bureau of Statistics. *10 Years of Pakistan in Statistics 1972-80*. Karachi. 1984.
22. Pakistan. Ministry of Finance. Economic Adviser's Wing. *Pakistan Economic Survey 1984-85*. Islamabad. May 1985.
23. Pakistan. Planning Commission. *The Sixth Five Year Plan 1983-88*. Islamabad. June 1983.
24. Thobani, M. "The Effects of a Change in Wheat Prices on Incomes". *Pakistan Development Review*. Vol. XVIII, No. 4. Winter 1979.
25. United Consulting Group Ltd. *Report on Agricultural Marketing in Pakistan*. Lahore. 1984.
26. Zahid, S. N. "Differences Between Sharecropped and Owner-Operated Farms in Sindh, Pakistan: Some Theoretical and Empirical Observations". *Pakistan Journal of Applied Economics*. Vol. 2, No. 2. 1983.

Concluding Remarks

SYED FAKHAR IMAM

(Speaker, National Assembly of Pakistan)

Chairperson

I should like to commend Professor Mahmood Hasan Khan for his very learned discourse in which, in some ways, he has touched upon the most sensitive issues that may confront any policy-maker in a developing country, especially in a country which may be undergoing the phase of economic, social and political development that we are passing through today. He has looked at the social, economic and political constraints of an academician. The policy-formulator has to look at those very options from the vantage point where the art of compromise has to be arrived at. Some individual may say that, of course, the social power structure is primarily based on our land tenure systems and land ownership systems but the policy-makers have their own limitations. Of course, this is so in all the systems of governments in the world. But in Pakistan the issue of land reforms in the pre-partition and post-partition era has been an issue looked at primarily from the land-ceiling angle; but I think it should also be examined from other angles. As Mr Shafi Niaz has said, when we consider land reforms in Pakistan we perhaps only look at one dimension, which is land ceiling, and the other three or four factors which go along with it are often not considered in depth. Normatively Prof. Mahmood Hasan Khan may have come up with this highly differentiated and asymmetrical analysis; but, again, how many micro analyses have been done pertaining to cropping pattern options, given our factors of land, labour, technology and capital? To what extent has there been investment in terms of training persons in modern agriculture techniques and to what degree have research and extension been spread to the farmers? What has been the flow of the terms of trade in Pakistan's economy? Have they been flowing from the rural areas to the urban areas from 1947 to 1985, or have they been flowing in the reverse direction from the urban areas to the rural areas? And what are the rural and urban social indices of rates of literacy in the urban and rural areas, rates of educational levels, rates of potable water availability and rates of energy consumption in the urban and rural areas? Many articulate men and women have

talked about policy-making but there has been no comparison drawn, on the per capita basis, of these essential factors of our urban and rural people. When an election is held, it is the rural people who get elected — naturally, as the rural people form 70 percent of the population and naturally those people will come within the rural areas who have had a greater opportunity for acquiring positions of influence and power within the political arena. But the same also goes within the urban areas in Pakistan: only those people, whether it is in the commerce, industrial or trade sector, come forth who have had more opportunities and who are also likely to be in the political arena. But when we try and compare it on an urban-rural basis, then we do not sometimes analyze it along these lines because the rural areas being less literate and articulate, their influence in policy-formulation is not commensurate with their representation. For instance, how may major newspapers reflect the role of the rural areas? Does any one major newspaper dwell at length at the issues facing rural people as outlined in the theoretical framework put up by Professor Mahmood Hasan Khan? Overall, it has been the urban factor which has been the dominant factor. And how many times have we had the rural people coming out and playing the role of power and influence in 37 years? About 17 years, perhaps? Even in these 17 years, can it be said that total dominance was only of the rural people? Were the other power elites, viz. the armed forces, bureaucracy and urban elites, not having any say? Even in the National Assembly today the number of agriculturists and the extent of their land holding are not yet determined. I think we would have to make an analytical study of that. Then, how can we differentiate the classes of people according to their holdings? And if we look at the social structure, the power structure, I am not so sure that we may come out with the kind of power structure that is commonly understood by the people as the one which actually influences decisions. Maybe they do, maybe they do not; I am not sure because I have yet to see a study, a micro-analysis study. But, more than that, I think the agricultural economists of Pakistan should address themselves to these questions, namely cropping patterns, where the price differentials and the comparative advantages should accrue to Pakistan. I know, for instance, that of the four major crops over a 35-year time-span, sugar has been supported at the cost of other crops. I do not think this is true of the other three major crops, namely rice, wheat and cotton. There it has always been the middleman, whether it has been the government procurement agencies since 1977 or the private procurement sector before 1977, who have been the beneficiaries, not the producer, whether it is small, big or middle-size producer. Today we are importing edible oil for Rs 700 crores, milk and milk products for 40–50 crores, and timber for Rs 70–78 crores. Pakistan has less than four percent of its total land area under forest and we have not even touched on that subject today. About livestock, which contribute 28 percent to our agriculture, not one person has spoken today except in the brief introduction by Professor Mahmood Hasan Khan. So, I think the concepts of agro-economics in Pakistan needs many more micro studies and

I think our universities, our research centres, our extension people and the farmers need to explore these areas because ultimately it is the small producer who must be made capable of producing at optimum levels of production.

The 50-acre farm in Pakistan is supposed to be a large-size holding. Now what are the optimum levels of efficiencies of production and the economies of scale as far as land holding is concerned in Pakistan? Can this size of holding, given the levels of inputs of fertilizer, pesticide, extension, research and education, be considered 'large' on a comparative economy of scale? Anyway, these are value judgements. Of course, we have to go back and see the levels of development at which Pakistan stands today in industry, in commerce and in agriculture. Agriculture was our base where we could have been having surpluses of production. But where are we today? Last year 2.9 million bales of cotton, this year 5.9 million bales of cotton. Look at the extreme variation, the drop, it is a 100-percent drop due to weather and lack of pesticide application this year. A yield of 10 to 11 million tonnes is what we are hearing can be expected this year. Nobody knows the last figure. 13 million tonnes was predicted, but last year it was only 11 million tonnes. For two years successively we had surpluses. We did not know where to put them; it was put under the canvas. So, there are variations in Pakistan's agriculture and still the major factor which affects our farming strategies is weather, followed by all these other strategies in which, of course, I think pricing mechanisms have played a very essential part. But I would still say that the policy-maker still has to look at these differentials, at these policy implications in a manner, perhaps, where the academician, the theoretician, the philosopher may have to look at it from a different vantage point. But, of course, without the philosopher, the theoretician and the person who can always point his finger at the policy, the person who has to compromise (which is the policy-maker), I think we would not have progressed. Preparation of such dissertations, the holding such fora which provide us this opportunity for arriving at decision make it better for us. Without having full-fledged debate and discussion, policy-making can never be meaningful.

ISSUES IN AGRICULTURAL DEVELOPMENT

In a study of the wheat market in Pakistan, the author has found that the wheat market is highly volatile and that the government's intervention in the market is necessary to stabilize the market. The author discusses the issues in agricultural development and the role of the government in the market. The author also discusses the role of the private sector in the market and the role of the government in the market. The author also discusses the role of the government in the market and the role of the private sector in the market. The author also discusses the role of the government in the market and the role of the private sector in the market.

Two questions have been raised in the study: first, what is the impact of the weather on the wheat market? Second, what is the impact of the government's intervention in the market on the wheat market? The author discusses the impact of the weather on the wheat market and the impact of the government's intervention in the market on the wheat market. The author also discusses the role of the private sector in the market and the role of the government in the market. The author also discusses the role of the government in the market and the role of the private sector in the market. The author also discusses the role of the government in the market and the role of the private sector in the market.

Among other things, the present paper discusses the following questions. The argument is built up in three stages: first, the wheat market; second, the wheat market in relation to other relevant variables; third, the probabilities of transient production deficits in wheat in Pakistan and also with the expected volumes of supplementary imports of wheat.

*Dr. Cornelius is Professor at the Erasmus University, Rotterdam, while Mr. Kuyper is Assistant to Professor Cornelius. The authors wish to thank Professor de Boer for his help in the early stage of the research.