

The Problem of Agricultural Taxation in West Pakistan and an Alternative Solution

by

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INTRODUCTION

In Pakistan the problem of resource mobilization has become acute in recent years. The Fourth Five Year Plan [34, Pp. 11-18], for instance, reported that the central government could finance only 72.5 per cent of its planned investment during the Third Five Year Plan. The provincial situation was described to be even worse. According to the estimates of the Planning and Development Board [47, p. 7] during the first four years of the Third Plan, the implementation of the public sector programme for West Pakistan was only 52.4 per cent.

The fundamental reason of the shortfall of resources is that Governments have failed to tap all possible domestic sources of revenue. Taxation is [11, p. 29] by far the most important source of development finance both in its direct contribution to revenue and in its indirect effects on control, incentives and in reducing income inequalities. Taxation is necessary for the stable and sustainable growth of developing economies.

Agricultural taxation falls within the purview of general taxation and its importance is considerably increased as agriculture is a major sector in Pakistan. Over seventy per cent of the population depends directly on agriculture for its livelihood and about 40-50 per cent of West Pakistan's GNP is the direct outcome of agricultural operations.

In short, the importance of a suitably guided tax policy lies in its influence on: first, the overall level of investment and thus the rate of growth; second, the efficiency of resource utilisation within the agricultural sector and the relationship between actual and potential output each year; third, the distribution of disposable income between rich and poor.

In view of its postulated potential the present study intends to investigate the problem of agricultural taxation in West Pakistan with the aim of recommending an agricultural taxation policy. The study covers 1966/67 to 1969/70 a short period for a comprehensive economic analysis but one which was chosen because of increasing government concern for revenue-raising plans during these years.

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The present study differs from other studies of this nature in two important respects. First, the study hopes to improve the empirical content of agricultural taxation analysis as its estimates are based on incidence analysis and includes taxes on agriculture by local governments. Second, efforts are made to apply economic theory to the actual situation of agriculture in West Pakistan, especially in the context of the formulation of the agricultural taxation policy.

2. NATURE AND STRUCTURE OF AGRICULTURAL TAXATION

Central, provincial and local governments tax agriculture in one form or another. The Central government depends, to a large extent, on indirect taxes. Both the provincial and local governments, however, place a greater reliance on direct taxes on agriculture, although indirect taxes also generate some revenue. While the rate structure of indirect taxes is too complicated to be included in the present study, an outline of the direct taxes with their rate structure may help the reader in understanding the concept of agricultural taxation in West Pakistan.

The system of agricultural taxation in West Pakistan includes taxes such as land revenue and its cesses,¹ water rates, and agricultural income tax. Apart from these land taxes, agriculture is also subjected to marketing taxes, such as octroi on agricultural commodities, taxes on cattle fairs and on sale of agricultural land etc. Because of the variant nature of these taxes it is necessary to treat them separately:

2.1 Land Revenue and its Cesses: Land revenue is the oldest system of taxing land in Pakistan. Originally the land revenue base was defined to be rental value but as a result of later developments the rental value tax base has been transformed into a crude acreage tax base. Currently, the land revenue is assessed on the basis of cultivated area and the tax rates differ from farm to farm depending on the assessed grade of land. Present land revenue rates, together with cesses, are given in Table I below.

TABLE I
RATE STRUCTURE OF LAND REVENUE AND ITS CESSES
(Rs. per cultivated acre)

Tax kind	Land classification				
	I grade	II grade	III grade	IV grade	Rainfed
(1) Land revenue	5.00	3.75	2.25	1.75	1.00
(2) Development cess	1.75	1.31	0.79	0.61	0.35
(3) Education cess	0.05	0.04	0.02	0.02	0.01
(4) District council rate	2.75	2.06	1.24	0.96	0.55
(5) Local rate	2.50	1.88	1.12	0.88	0.50
(6) Mosque fund	0.10	0.08	0.05	0.04	0.02
Total (1-6)	12.15	9.12	5.47	3.26	2.43

Source: [31, p. 153]

¹A cess is an additional surcharge on the land revenue.

As can be seen from Table I, the land revenue rates vary between Rs. 5.00 per acre for first grade land and Rs. 1.00 for rainfed land. If the land revenue cesses, comprising of development cess, education cess, District Council rate, local rate and mosque funds are accounted for, the respective rates for first grade and rainfed lands rise to Rs. 12.15 and Rs. 2.43 per acre. It must be pointed here, that the last three cesses accrue to local governments for which no accounts are maintained. This generally results in an underestimation of the tax receipts from agriculture.

2.2. *Water-rates:* In recent years, the water rate has emerged as an important source of revenue for West Pakistan. During the sixties, the government followed a deliberate policy of increasing the water rate. Over the period 1960-65 the water rate was almost doubled [4, p. 6]. This was followed by another 20 per cent increment in 1967/68. A 15 per cent increment was enforced in 1969/70.

The dominating feature of these rates, as is shown in Table II, is that they vary from canal to canal and that there are differential rates for each crop. The canal variations are not important in magnitude. Wide variations, occur between different crop rates. On the upper Bari Doab canal, sugarcane, with its substantial water requirements, is assessable for a water rate of Rs. 33.74 per acre cropped, fodder for the lowest rate of Rs. 5.89. This is true for every canal, although the lower limit drops down to Rs. 2.40 (not listed in the Table) per acre cropped for some minor crops. Thus water rate charges are determined on cropland basis.

Economists treat water rate as the price of water supplied rather than as a tax. This is an unrealistic assumption perhaps caused by a confusion between the water rate and the water advantage rate. The water rate is a tax³ for the following reasons:

(i) One essential element of a tax is the presence of discrimination. The water rate, too, suffers from a marked degree of discrimination. It may be shown by quoting the instance of two farmers having holdings of 10 acres each, supplied with an equal amount of canal water. Suppose one of them grows only five acres of any crop and that the other plants 20 acres of the same crop (double cropping) during the same year. It does not matter what private means be utilized for double cropping. Since water supplies are equal both should be subjected to an equal water rate charge. This is not so in practice. The second farmer will be liable to 4 times the water rate in relation to the first. This implies that the water rate does discriminate between farmers.

³The district council rate is charged at 55%, the local rate at 50%, the development cess at 35%, the mosque fund at 2%, and the education cess at 1%, of land revenue rates.

³Whether the water rate is a tax or a price will be discussed in detail in a forth-coming study to be undertaken by the author, "Canal Water Distribution and its Pricing Policy in the Punjab".

TABLE II

WATER RATES PREVAILING ON DIFFERENT CANALS FOR MAJOR AGRICULTURAL CROPS IN WEST PAKISTAN DURING 1969/70

Crops	(rate in rupees per acre cropped)							
	1	2	3	4	5	6	7	8*
Sugarcane	33.74	32.80	32.80	32.80	—	31.20	32.80	33.60
Fruits and vegetables	21.07	20.80	20.80	20.80	20.00	20.80	20.80	20.80
Rice	16.86	16.00	16.00	14.40	16.00	12.80	14.40	15.64
Cotton	16.02	16.80	16.00	16.80	14.40	14.40	14.40	16.80
Oil seed	12.22	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Wheat and barley	10.12	10.40	10.40	10.40	—	9.60	9.60	10.40
Maize	8.44	9.60	9.60	9.60	8.00	8.00	9.60	9.60
Unclassified crops	10.40	10.40	10.40	10.40	10.40	10.40	10.40	10.40
Fodders and jowar	5.89	9.40	6.40	6.40	6.40	6.40	6.40	6.40
Bajra, gram and pulses	7.64	8.00	8.00	8.00	8.00	8.00	8.00	8.00

*The rates given in the source pertain to 1968 rates. They were raised by 15% during 1969/70, hence the rates included here have been upgraded by 15%. Rates except sugarcane, rice, cotton and wheat have been assumed similar to those given in column (2).

(1) Upper Bari Doab; (2) Upper Jhelum, Lower Jhelum and Lower Bari Doab; (3) Lower Chenab; (4) Haveli, Pakpattan and Mailsi Canals; (5) Taunsa Canal; (6) Thal Canal; (7) Lower and Upper Swat and High Level Canals; and (8) Rohri Canal.

Source: [5, Pp. 1-3 and 4. p7].

(ii) Price in general is defined in terms of value per unit of a good. Water is distributed on the basis of cultivated area. The water advantage rate, too, is assessed on the basis of cultivated area, but the water rate is charged on a cropland basis. From the above relationship it can be deduced that the water advantage rate corresponds to price of water.

(iii) Given the average cost curve (marginal cost pricing becomes ineffective due to the excessive fixed cost component of building canals); the higher the marginal product, the higher will be the price of a factor of production. The water advantage rate varies according to the grades of land and hence according to the marginal productivity of water. Since water on first grade land is relatively more productive compared to lower grades, the water advantage rate is accordingly higher on first grade land. The water rate on the other hand is a uniform levy irrespective of land grades. It may, therefore, be inferred that the water advantage rate rather than the water rate is a concept closer to price.

2.3. *Agricultural Income Tax:* The agricultural income tax in fact is a surcharge on land revenue and by definition may be treated as a cess. However, it provides for exemption of farmers whose land revenue liability does not exceed Rs. 250.00 in the Punjab and Rs. 450.00 in Sind. Despite its importance this tax is a meagre source of revenue for the government.

2.4. *Other Taxes on Agriculture:* In addition to the taxes mentioned above local governments such as district councils, municipal committees and union councils, are authorised to levy and collect taxes from agriculture. Octroi on the sale of agricultural commodities is generally levied at 0.40% to 0.70% of the value of commodities marketed; sales tax on animals marketed at 5 per cent of their value; the registration and sales tax on agricultural land at 1%. The toll tax, the hearth tax etc., are some of the other taxes which contribute significantly to the revenue of these governments.

2.5. *Agricultural Tax Administration:* The administrative machinery, headed by Director of Land Revenue Records of the provincial governments is a typical bureaucracy. The *patwari* (revenue recorder) is the key functionary of the revenue department in the sense that, being at the bottom among the salaried staff, he performs the actual work and is directly linked with the farming community. The intermediaries in general have only a supervisory role.

The *patwari* is solely responsible for primary statistics [14, Pp. 47-67]. The maintenance of cadastral records (ownership rights), preparation of the record of crops sown each season together with irrigation status, assessment of land revenue, cesses due each individual farmer, issuance of certified copies of his records to farmers on demand and demarcations and surveys of agricultural lands in case of a dispute among neighbouring farmers are some of his important functions. In addition he submits a copy of land revenue, assessed by him on an individual farm basis, to his superiors. This after verification is passed down to village headmen through the *patwari*. The headmen proceed to collect land revenue from individual farmers, which is thus deposited with the government treasury. The functioning of the *patwaris* is of crucial importance and will be studied later.

3. INCIDENCE ANALYSIS AND THE MAGNITUDE OF TAX BURDEN ON AGRICULTURE

The estimates of this section have been made on the basis of incidence analysis. According to Seligman [48, Pp. 1-5] the study of incidence is nothing but a painful search for the ultimate tax payer. The impact of the tax results from its imposition and, in the absence of 'shifting', corresponds with incidence.

3.1. Incidence Analysis

A. *Incidence of Taxes and Non-Agricultural Sector:* According to incidence analysis the more direct the tax, the more difficult shifting becomes; and the more indirect the tax, the greater the possibility of transferring its burden from the point of impact to another point of incidence. This applies to most taxes in the non-agricultural sector.

Empirical studies show that the direct taxes are hard to shift. Harberger [16, Pp. 215-40] in a study of United States, on income and corporation tax, has stated that plausible alternative assumptions about the relevant elasticities all yield results in which capital bears very close to 100 per cent of the tax burden. In a separate study, Cragy, Harberger and Micszkowski [8, pp. 811-21] have concluded that income and corporation tax is not shifted at all but rests entirely upon capital owners. Gordon [13, Pp. 731-58] in an independent study has suggested a similar conclusion. A detailed study on income and corporation tax in India has been attempted by Gandhi [12, Pp. 40-44] suggesting a 100 per cent burden of direct taxes on the non-agricultural sector.

The experience with indirect tax shifting suggests quite an opposite picture. In a study of the United States, Brownlee and Perry [3, Pp. 235-49], have determined the effects of an excise tax reduction. They concluded that when taxes were reduced, the prices of commodities subject to retail excises fell immediately by the amount of the tax reduction, implying that a 100 per cent of the taxes is shifted to the consumers. John F. Due [10] has reported a similar trend of prices due to excise reduction during 1959 in the United States but with tax shifting a little less than 100 per cent.

However, a 100 per cent tax shifting does not mean that 100 per cent of the indirect taxes are borne by the agricultural sector. In a study of West Pakistan the International Bank for Reconstruction and Development [20, p. 16] has concluded that 27 per cent of all indirect taxes are ultimately paid by the agricultural sector.⁴ Alternatively 73 per cent of the indirect taxes are borne by the non-agricultural sector. In my estimates I have used the same ratios for division of burden of indirect taxes.

B. *Agriculture and its Ability to Shift a Tax:* An annual value tax (crude acreage tax) is liable to shifting. The argument in theory is that an annual value tax tends to curtail investment in agriculture and to encourage abandonment of marginal land, with the result that the tax tends to be shifted forward to consumers through higher commodity prices. The greater the movement of resources from agriculture the larger the reduction in output and the larger the price rise that can be expected.

⁴ The Pakistan Taxation Enquiry Committee 1960 also estimated that nearly 27 per cent of the total indirect taxes were paid by the rural population.

This is a theoretical conclusion far removed from reality. Assumptions, such as the perfect mobility of the factors of production, economic rationality of the farmers and land tax greater than total rent (equals economic rent plus returns for landlord's investments), are contradictory to the actual conditions in agriculture, especially in less developed countries. The factors which tend to counterbalance the tax-induced abandonment of marginal land in Pakistan are:

1. The low existing land revenue rates;
2. The immovable character of land and hence of capital invested; and
3. The immobility of agricultural labour for economic and non-economic factors.

Economic factors are illiteracy, simplicity of agricultural operations and lack of alternative employment opportunities outside of agriculture. The non-economic factors include deepseated attachment to ancestral property, social values attached to land ownership, familiarity of environment and strong family ties. These factors in certain instances are so intense as to dislocate the tax-induced effects. In addition, a heavy land tax may not necessarily lead to land abandonment and hence lower produce but may induce farmers to work harder and use land more intensively. In this case, there may be greater production and lower prices in spite of higher tax rates. Furthermore, farmers usually are price takers. The power to charge a higher price because of an increase in taxes is limited due to the perishable nature of agricultural commodities, homogeneity of their products, long time lag of production, limits on cultivable land and their basic cash needs, inelasticity of supplies, and dependence on nature. It seems appropriate to assume that incidence of land taxes such as land revenue, land revenue cesses and water rate is not shifted from agriculture.

These conclusions are in agreement with the results of other studies. Seligman [41, p. 257] concluded, "In reality, however, there is no general shifting. A tax on the rural land owner often tends to stay where it is put". John F. Due [10, p. 208] points out, "The portion of the tax on land and other non-reproducible assets will reduce the net return from land and directly reduces the real income of the land owner". Joshi [21, p. 64] in India stated, "They can neither shift this burden on the buyers in the form of increased prices nor backward through reduction of buying prices of the productive agents. The burden squarely rests on the land owners themselves."

These studies have based this conclusion on the assumption of the inability of farmers to manipulate prices and on the dominating position of traders. Under these conditions, even an indirect tax on agricultural commodities has the tendency to rest ultimately on the agriculture. Traders, in general, pass on the burden through lower price offers for agricultural commodities. Thus any tax imposition on agricultural commodities is price deductible. This is the case with octroi charges (market entry tax) and cotton export duties.

In the light of the above discussion, one can assume that taxes levied on agriculture are hardly shifted. Usually the impact and incidence of a tax on agriculture are coincident. The estimates of this section, are based on this assumption.

3.2. *Empirical Estimates:* This sub-section is devoted to a division of central, provincial and local government taxes between the agricultural and non-agricultural sectors.

A. Central Government Tax Revenue

The disaggregated data originally published by the Ministry of Finance [37, Pp. 1-4] serves as the basis of estimates in this study. The disaggregation is based on the actual point of collection for each category of taxes.

TABLE III

✓ DETERMINING THE SHARE OF AGRICULTURAL AND NON-AGRICULTURAL SECTORS IN CENTRAL TAX RECEIPTS ORIGINATING FROM WEST PAKISTAN

(in million rupees)

Revenue heads (1)	1966/67 (2)	1967/68 (3)	1968/69 (4)	1969/70 (5)
A. Total indirect taxes (a+b)	2682.1	2566.2	3165.0	3570.7
(a) indirect taxes net of cotton duty	2675.2	2560.1	3164.8	3570.7
1. customs	804.1	774.3	1148.7	1219.5
2. central excise	1187.3	1384.4	1522.2	1854.8
3. sales tax	683.8	401.4	493.9	498.2
(b) cotton export duty	6.9	6.1	0.2	—
(c) incidence on agricul- ture (b+27% of a)	729.2	697.3	854.7	964.1
(d) incidence on non- agricultural sector (73% of a)	1952.9	1868.9	2310.3	2606.6
B. Total direct tax	650.3	664.0	767.6	1055.8
1. income and corpora- tion tax	602.5	628.2	722.9	187.7
2. other taxes	47.8	35.8	44.7	1055.8
C. Total central taxes from West Pakistan (A+B)	3332.4	3230.2	3932.6	4626.5
1. Total incidence on agriculture (c)	729.2	697.3	854.3	964.1
2. Total incidence on non-agricultural sector (B+d)	2603.2	2532.9	3077.9	3662.4

Sources: Col. 2-4 from [37, p. 3.] Col. 5 based on [6, Appendix Table 3.A].

In distributing the burden of indirect taxes between the agricultural and non-agricultural sectors, it is assumed that agriculture contributed 27% of total indirect taxes net of cotton export duty while non-agricultural sector contributed the residue—73 per cent. In addition the incidence of cotton export duty is assumed to be on agriculture. Income and corporation taxes are confined exclusively to non-agricultural sector. Since they are not liable to shifting, the non-agricultural sector stands as the ultimate tax payer. Agriculture perhaps contributes very little to other direct taxes. This is because, firstly, these taxes have high exemption limits, such as wealth tax and estate duty. Agriculture, being a comparatively poorer sector, may not qualify for tax imposition. Secondly, some direct taxes have little to do with agriculture, such as rehabilitation tax. Moreover, they form a negligible fraction of the total central receipts. Therefore, we assume the incidence of such direct taxes to be on the non-agricultural sector.

Table III computed on the basis of the above assumptions, reveals a disproportionately greater burden of central taxation on the non-agricultural sector. According to the calculations, 72-79 per cent of the total tax revenue came out of the non-agricultural sector while the contribution of agriculture varied roughly between 21-28 per cent only.

B. *Provincial Taxation:* On the basis of the argument developed in subsection 3.1, table IV presents a summarised statement of the likely incidence of provincial taxes.

TABLE IV

PROVINCIAL TAXATION AND ITS BURDEN ON AGRICULTURAL AND NON-AGRICULTURAL SECTORS

(figures in million rupees)

Revenue head	1966/67 revised	1967/68 revised	1968/69 revised	1969/70 revised
A. Direct taxes on agriculture	408.1	422.6	447.1	526.2
1. Land revenue proper	106.0	112.0	113.2	113.5
2. Development cess & others	64.9	66.1	64.4	60.9
3. Water rate	234.2	239.5	294.5	346.8
4. Agricultural income tax	3.0	5.0	5.0	5.0
B. Indirect taxes	318.9	335.9	349.5	419.5
1. Agricultural sector	86.1	90.7	94.4	113.3
2. Non-agricultural sector	232.8	245.2	255.1	306.2
C. Total incidence (A + B)	727.0	758.5	826.6	945.7
1. Agriculture (A+B-1)	494.2	513.3	541.5	639.5
2. Non.agriculture (B-2)	232.8	245.2	255.1	306.2

Sources:—Direct taxes from [46]. Indirect taxes from [6, p. 64].

The incidence of direct taxes like land revenue, water rate, development cess and agricultural income tax has been assumed to be on agriculture. The provincial indirect taxes, the main component of which is excise tax, has been treated like central indirect taxes.

According to the table, the West Pakistan government realized a sum of Rs. 727 million during 1966/67 which rose to Rs. 946 million during 1969/70 showing an increase of 30.12 per cent over the period. Of the total tax revenue, mobilization from agriculture during the whole period, was close to 68 per cent. The remaining 32 per cent was realized from non-agricultural sector.

C. *Local Taxation:* Statistics on local taxation are almost nonexistent. In preparing the estimates of this missing part, a dependence on certain assumptions has become inevitable.⁵ A detailed statement of the magnitude of local finance is presented in Table V below.

TABLE V

LOCAL TAXATION AND ITS INCIDENCE ON AGRICULTURAL AND NON-AGRICULTURAL SECTORS

(figures in million rupees)

Revenue head	1966/67	1967/68	1968/69	1969/70*
A. Agriculture				
1. District council revenue	71.56	72.32	85.27	93.44
2. Local rate	53.00	56.00	56.60	56.75
3. Mosque fund	1.06	1.12	1.13	1.14
4. Union councils	37.80	37.80	37.80	37.80
5. Municipal committees	131.61	140.07	178.39	210.09
Total A	295.03	307.31	359.19	399.22
B. Non-agricultural Sector				
1. Union councils	8.00	8.00	8.00	8.00
2. Municipal committees	54.35	61.04	77.74	91.55
Total B	62.35	69.04	85.74	99.55
Total local taxation (A+B)	357.38	376.35	444.93	498.77

*1969/70 figures for district council and municipal committees have been derived through extrapolation based on growth trend of their respective revenues. The municipal committee revenue (A-5+B-2) for all years represent total revenue is constituted by non-tax revenue.

Sources:—A-1, A-5 and B-2 from [40, Pp. 92-112]

A-2 to A-4 and B-9 from [6]

⁵ A detailed account of the underlying assumptions has been provided in [6, pp. 32-67].

As is indicated in the table, the incidence of local taxes, such as revenue of the district councils, local rate and mosque fund, has been solely on agriculture. This is because both the local rate and mosque fund are the cesses of land revenue, whereas the revenue of the district councils mainly comes from agriculture. This conclusion is supported by Gandhi's assumption [12, Pp. 40-44] on the incidence of taxes of district boards in India.

The incidence of Union Council revenues has been determined according to the number of rural and urban union councils. The municipal committee burdens for the agricultural and non-agricultural sectors has been distributed on the basis of Platt's classification of municipal revenue according to sources of revenue [38].

A summarized statement of the results of sub-section 3.2 has been presented in Table VI.

According to the table, of the 1966/67 Rs. 4.4 billion tax revenue collected from West Pakistan, Rs. 1.5 billion were from agriculture, Agriculture's contribution came to Rs. 2.0 billion of a total of Rs. 6.1 billion during 1969/70. Percentagewise, these figures are 35.4 and 33.0 per cent respectively. On the basis of our estimates, the relative share of agriculture declined by 1.4 per cent over the period. Alternatively, the non-agriculture sector compensated for the movement and its share rose from 65.6 per cent in 1966/67 to 67.0 per cent in 1969/70.

TABLE VI
SUMMARIZED RESULTS OF THE BURDEN OF TAXATION

		(in million rupees)			
Sectors	1966/67	1967/68	1968/69	1969/70	
1. West Pakistan	4416.8	4365.1	5204.1	6071.0	
(1) Central taxes	3332.4	3230.2	39.326	4626.5	
(2) Provincial taxes	727.0	758.5	796.6	945.7	
(3) Local taxes	357.4	376.4	444.9	498.8	
2. Agriculture	1518.4	1517.9	1785.4	2002.8	
(1) Central taxes	729.2	697.3	854.7	964.1	
(2) Provincial taxes	494.2	513.3	571.3	639.5	
(3) Local taxes	295.0	307.3	359.2	399.2	
3. Non-agriculture	2898.4	2847.2	3418.7	4068.2	
(1) Central taxes	2603.2	2532.9	3077.9	3662.4	
(2) Provincial taxes	232.8	245.2	255.1	306.2	
(3) Local taxes	62.4	69.1	85.7	99.6	

Source: Tables III, IV and V.

3.3. *Negative and Disguised Taxation:*

Negative and disguised taxes are members of the same family. They have at least one common ancestral aspect in that they both deal with price policy, but at opposite extremes. A negative tax refers to a positive price over the market price for sectoral, commodities or to cash payment or subsidy (supplied at free or nominal prices) on intermediate goods or services; whereas a disguised tax refers to an obligatory price lower than the market price for sectoral commodities. The disguised tax may further cover the effects of scarcity value of foreign exchange and hidden taxes like bribery and black marketing.

As explained, the above terms refer to resource movements occurring through prices. A closely related concept, often used in economic analysis, is the terms-of-trade analysis. This analysis, instead of looking at price differences, pertains to a net transfer of resources to a sector.

Studies conducted on these aspects tend to support the conclusion that agriculture benefitted from such movements of resources at the expense of the non-agricultural sector. Hamid [15, Pp. 422-47] has estimated that about Rs. 1150 million were transferred to agriculture during 1968/69. Regarding the terms-of-trade, Lewis [24, Pp. 381-92] has maintained that during the decade of sixties, they were in favour of agriculture. Though no empirical estimates of transfer of resources due to terms-of-trade were made, these two sources together imply a flow of total resources into agriculture of above Rs. 1150 million.

Whatever the magnitude of resource transfer into agriculture, it is difficult to say anything about the net flow of resources between the two sectors unless similar estimates are made for the non-agricultural sector.

Hufbauer [19, Pp. 23-25] in a study of West Pakistan, has found out that primary commodities received a subsidy of 10 per cent of their value added whereas the subsidy on manufactured commodities was as great as 114 per cent of their value added. In a recent study on intersectoral capital flows in West Pakistan, the International Bank for Reconstruction and Development [20, p. 18] concluded that "It appears likely that these net outflows (from agriculture) would amount to Rs. 500-900 million in 1969/70 and Rs. 600-1200 million in 1974/75 depending on the annual rate of growth of value added. The respective two figures of net outflows correspond with 5.4 and 7.2 per cent per year growth rates of value added". Both these sources emphasize the fact that the magnitude of resource transfer into non-agricultural sector was greater than into agriculture.

4. **PRESENT AGRICULTURAL TAX POLICY AND SCOPE FOR ADDITIONAL TAX REVENUE IN AGRICULTURE.**

The need for and the importance of increasing internal resources was stressed in the introductory section to this study. It was also pointed out that taxation in general and agricultural taxation in particular are crucial in this respect. While the tax revenues under the current policy are small relative to demand, increases in tax revenue seem to be inevitable. Whether or not additional taxation can be imposed and additional funds realized is the subject of this section.

Increases in revenue through taxation can be realised through, (a) the revision of tax rates or widening of the tax base; (b) improvements in administrative efficiency; and (c) by making the tax system income or price-elastic. Increases in tax revenue through these variables, however, are constrained by the relative burdens, efficiency, and elasticity of the current tax policy. A prerequisite to the question of additional taxation is to assess the current tax policy in agriculture with respect to the above factors.

4.1. *Relative Tax Burdens*: One of the most widely accepted principles for a distribution of tax burdens is the principle of equity. Table VII presents data to show inter-sectoral equity.

TABLE VII

INTERSECTORAL DISPARITIES IN INCOMES AND TAXES IN WEST PAKISTAN
(Labour in thousands, Income and Taxes in Million Rupees and
Income per Worker in Rupees)

Sectors	1967/68	1968,69	1969/70
A. Agriculture			
1. Working labour force	8581	8707	8868
2. Income	13994	14089	15653
3. Total taxes	1518	1785	2002
4. Income per worker (2/1)	1631	1618	1765
5. Taxes as per cent of income (3/2)	10.85	12.67	12.80
B. Non-agriculture			
1. Working labour force	7104	7429	7769
2. Income	18947	21265	23174
3. Total taxes	2847	3418	4068
4. Income per worker (2/1)	2667	2862	2983
5. Taxes as per cent of income (3/2)	15.04	16.07	17.57
C. Disparities			
1. Income (B-2) as percent of (A-2)	163.5	176.9	179.2
2. Tax (B-5) as percent of (A-5)	138.6	126.8	137.3

Sources: Labour force from [22]. Income from [39, p. 3].

As is evident from the table, the tax income ratio in agriculture varied from 10.85 to 12.80 percent of its income over 1967/68—1968/69 as compared with 15.04 to 17.57 percent in the non-agricultural sector. Two conclusions can be drawn from the ratios in the two sectors. On the basis of a flat tax rate, agriculture was undertaxed. But if equity is to be considered where proportional or increasing progression in tax rates becomes desirable, agriculture perhaps was overtaxed relative to the non-agricultural sector. According to propor-

tional or increasing progression, the tax income ratios in the non-agricultural sector should be at least as high as income itself. But, as is shown in Table VII, per worker income in the non-agricultural sector in relation to agriculture stood at 163.5 and 179.2 per cent respectively for 1967/68 and 1969/70, whereas the relative tax ratios were only as high as 138.06 and 137.3 per cent for the respective years.

This differs from Hamid's general conclusion. Depending solely on direct taxes in the two sectors [15, Pp. 422-47] he had concluded that agriculture during the sixties was undertaxed. His conclusion is inconsistent as the data (in his own Table No. 4-III) does not allow for a general statement of this kind for West Pakistan. According to his estimates during 1969/70 tax income ratio for West Pakistan agriculture was 2.3 per cent whereas the non-agricultural sector contributed 2.6 per cent of its income for the same year. With these ratios under-taxation of agriculture can only be claimed under the assumption of flat tax rates but, with considerations to equity, agriculture might be over-taxed.

The situation within agriculture is considerably worse. Table VIII gives the intrasectoral burdens of direct taxes within agriculture separately for tubewell and non-tubewell farmers. It will be seen from this that the incidence, of the water rate, which is based on the area sown and not on the cultivated land, is higher per acre for small farmers than for large farmers, because of the higher intensity of cultivation by the small farmers, although the quantity of water used may be the same in both cases. Thus the small farmer is penalised for cultivating the land more intensively whereas the large farmer is not penalised for cultivating the land less intensively. Again the incidence of the land revenue, which is based on the cultivated area, rather than the owned area, is higher per acre for the small farmer than the large farmer, because the former cultivates a higher proportion of the area owned by him than the latter. The large farmer is not penalised for not cultivating a large proportion of his land, which in some cases may be more than half. Thus the water rate and the land revenue systems encourage less efficient use of the scarce water and land resources of the country.

In addition, government intends to follow a policy of water rate increments with greater marginal burdens on the small holders. The effect of a 15 percent increment in water rate has been shown in Table IX. A 15 per cent increment in water rate appears as a 17.7 per cent increment for small holders and only an 11.7 percent increment on large holdings for nontubewell farmers, due to intensity of land use. For tubewell farmers the respective increments are 20.5 and 17.5 per cent. Thus the marginal burdens resulting from the water rate increment policy are heavier for small holders than the big landlords.

In view of the exemption limit, the two (inter-and intrasectoral) conclusions may be reformulated. As gross income of less than Rs. 6,000 in the non-agricultural sector is exempted from direct taxes, the lower income groups in agriculture are taxed more in comparison to their counterparts in the non-agricultural sector and higher income groups in agriculture. The burden of agricultural taxation for higher income groups in agriculture, however, seems to be much lighter than for the non-agricultural sector.

In Pakistan as in other less developed countries, equity in taxation must be preserved. (1) The preservation of equity corresponds and is consistent with the objectives of national planning which include reduction of income inequalities. (2) Most people in the less developed countries live in degrading poverty.

TABLE VIII

THE LIABILITY OF WATER RATE, LAND REVENUE AND LAND REVENUE CASSES ON DIFFERENT SIZE OF HOLDINGS FOR FIRST GRADE LANDS IN WEST PAKISTAN

(area in acres)

Area and revenue	Non-tubewell farmers				Tubewell Farmers			
	0-12.5		12.6-25.0 25.1-50.0 Above 50		0-12.5		12.6-25.0 25.1-50.0 Above 50	
	7.96	19.47	36.98	75.29	8.69	20.66	37.61	74.76
1. Average farm size (cultivated area)	7.96	19.47	36.98	75.29	8.69	20.66	37.61	74.76
2. Intensity of cropping	118.3	90.3	88.4	77.8	136.7	130.5	133.5	176.6
3. Total sown area (1×2)	9.42	17.58	32.69	58.58	11.87	26.96	50.02	87.17
4. Total water rate at 16.03* per sown acre	118.89	281.81	525.02	939.04	190.28	432.17	801.82	1397.34
5. Water rate per cultivated acre (4÷1)	14.94	14.47	14.20	12.47	21.90	20.91	21.32	18.69
6. Total land revenue & cesses	96.71	236.57	449.31	914.77	105.46	251.05	456.46	908.33
7. Land revenue per cultivated acre (6÷1)	12.15	12.15	12.15	12.15	12.15	12.15	12.15	12.15
8. Cultivated area as percent of owners holdings	87.6	85.5	78.0	48.8	87.6	85.5	78.0	48.8
9. Land revenue per acre owned	10.64	10.39	9.76	5.93	10.64	10.39	9.76	5.93

* Average water rate of Rs. 16.03 equals water rate collected during 1969/70 divided by canal irrigated area in West Pakistan. During 1969/70 the total water rate collection was Rs. 346.5 million. According to Bureau of Statistics the area irrigated by canals was 28.63 million acres. The land revenue and cesses have been computed at Rs. 12.15 per cultivated acre which is the prevalent rate of land revenue and cesses for first grade lands.

Sources: [23, p. 72 and 35, p. 179].

TABLE IX

MARGINAL BURDENS OF A 15 PERCENT INCREMENT IN WATER RATE FOR DIFFERENT SIZES OF HOLDINGS

(figures in percent)

Farm Size	Cropping Intensity	Effect of a 15% Increment
(1)	(2)	(3)
Non-Tubewell Farmers		
0-12.5 acres	118.3	17.7
12.6-25.0 acres	90.3	13.5
25.1-50.0 acres	88.4	13.3
above 50.0 acres	77.8	11.7
Tubewell Farmers		
0-12.5 acres	136.7	20.5
12.6-25.0 acres	130.5	19.6
25.1-50.0 acres	133.0	20.0
above 50.0 acres	116.6	17.5

Source: Column (2) from [13, p. 72].

Wald has argued [44, Pp. 150-151] "To lift these people out of their poverty is more than a humanitarian goal, it is an economic necessity because poverty gives rise to much waste of manpower and productive talent". (3) The social unrest and political instability resulting from widening income inequalities, as it happened recently in Pakistan, may impede the process of growth. Since the aim of every economic policy is continued growth, it may be an economic goal to keep income disparities within a minimum limit. (4) An immediate objective of a tax system is to restrain mass consumption. Since low income groups in agriculture are characterised by underconsumption and higher income groups by luxury consumption, it is necessary to redirect taxation policy towards the higher income groups. (5) Even in the context of the benefit approach, equity in agriculture seems desirable as the rich in agriculture benefit more from the government's price and credit policy. (6) Finally income disparities in Pakistan agriculture have resulted in inefficiency of resource use at the factor proportion level. Due to differences in factor endowments, argues Kaneda, [22, Pp. 111-43.] the large farms have become capital intensive, demonstrating capital as a symbol of prestige whereas the small holdings have come to be labour intensive. Both these cases are inefficient and improvements are possible with an appropriate redistribution of capital and labour among the farmers. (7) In addition, according to Naqvi [30, Pp. 1-10] "When wealth is more evenly distributed, the monetary incentive to evade taxes is considerably weakened". It is on account of these factors that equity must be enforced in agricultural taxation.

4.2. *Efficiency of Agricultural Taxation:* Efficiency should be one of the basic criteria of an economic policy. There is a general consensus that a rational tax policy is one which aims at improvements in resource efficiency and

also provides for the maintenance of administrative efficiency. While resource efficiency is appropriate for encouraging output and hence future taxable capacity, administrative efficiency is helpful in bringing greater revenues to the government exchequer.

A. *Resource Efficiency*: Apart from inefficiency resulting from an inappropriate choice of factor combinations due to income disparities, agricultural resources in West Pakistan suffer from considerable underutilization. Table X gives the land utilization of agricultural holdings in West Pakistan.

TABLE X

SIZE OF HOLDING AND LAND USE IN WEST PAKISTAN

Size of holdings	Total farm area	Cultivated area	(area in 000 acres)
			Cultivated areas as per cent of total farm area = (3/2)
(1)	(2)	(3)	(4)
0-12.5 acres	15493	13572	87.6
12.6-25.0 acres	12533	10710	85.5
25.1-50.0 acres	9468	7087	78.0
50.1-150.0 acres	6539	3886	59.5
above 150 acres	4896	1694	34.0
Total	48929	37249	76.1

Source: [35, Pp. 178-79].

According to the table only 76 per cent of the total farm area was actually cultivated. A greater proportion of the waste results from large holdings. The relative waste increased from 12.4 percent on smaller holdings to 66 per cent on farms with a size greater than 150 acres. Again, as is given in Table IX, the intensity of cropping is much lower for large holdings than for small holdings.

The waste in agricultural land may be attributed to a defective tax base both for land revenue and for the water rate. Land revenue is based on cultivated area whereas water rate is based on cropland, so that they together represent a close association with the taxes based on actual incomes. Due's remarks in this respect are worth mentioning [10, p. 192] "Owners of large estates may prefer to use land in a very non-intensive fashion. Taxes based on actual income allow them to continue this practice". Since idle lands, although potentially cultivable, are free from land tax and the cultivated area free from water rate if nothing is planted, the large holders may speculate in anticipation of rising land prices. This results in an unnecessary waste of agricultural land.

Under the current tax policy, irrigation water is also inefficiently used. For an efficient use of irrigation water, the price of water should correspond to the amount of water supplied and price should be sufficiently high (consistent

with marginal productivity of water). Both factors are ineffective in Pakistan because the water rate has no relationship with the amount of water, while water advantage rate is too low to ensure efficiency. It may not be untrue to infer that the water rate, in fact, discourages efficient land and water use.

Perhaps due to underutilization of agricultural land and water resources, other factors of production are also misused. Unemployment and underemployment in agriculture is one of the characteristic phenomenon of underdeveloped economies. In Pakistan this is intensified by the underutilization of agricultural land. Lewis' [28, Pp. 166-91] two sector model, considers surplus agricultural labour as a factor of underdevelopment.

B. Administrative Efficiency: An effective and efficient administration is necessary for the execution of a tax policy and successful collection of the taxes. A tax system is no better than its actual execution; no matter how sophisticated and advanced a tax policy itself may look, it may turn out to be quite ineffective and inequitable because of administrative shortcomings in the actual setting. Surrey [42, p. 498], while stressing the need for good administration, points out, "It is increasingly apparent, however, that tax administration must receive far greater attention, if the goals of the tax policy are to be attained". The capability of a tax administration to enforce a tax, or recover the tax amount, depends upon its efficiency, which in turn is measured by the study of the cost of collection and prevailing tax evasions.

According to Andrus and Muhammad [1, Pp. 242-43], during 1964-65, 14 per cent of the total tax revenue in West Pakistan was disbursed for tax collection. In the United States [10, p. 154] the cost of collection of property taxes typically varied between 1-1.5 per cent of revenue. The Economic Commission for Asia and the Far East [11, p. 45] has reported that "currently, costs of collection of the more important taxes are well below 5 per cent of yield in the countries of the region". In comparison the costs of collection in Pakistan seem unnecessarily high.

Nonetheless, higher costs of collection sometimes are associated with recovering a fuller amount of taxes, and may not be a true indicator of the administrative efficiency unless tax evasions are brought into the picture. It is hard to estimate tax evasions on a West Pakistan basis. However, the scattered and available information indicates a high degree of tax evasion in Pakistan. In a meticulous study of revenue administration in Pakistan, Haider [14, Pp. 47-67] states an illustration of tax evasion in the Lahore Tehsil. According to him, during 1960/61 the total revenue demand for Lahore Tehsil stood at Rs. 8807.87, out of which Rs. 5743.28 were outstanding. In other words only 35 per cent of the revenue demand was recovered, showing 65 per cent tax evasion.

Both cost of collection and existing tax evasions reflect the inefficiency of the current tax policy at administrative levels. This may be attributed to corrupt revenue officials. Haider [14, p. 62] has reported that, in pursuit of their self-interests, *Patwaris*, the key functionaries of revenue administration, can and do harass farmers at the risk of their administrative obligations. According to him the harassment usually takes the form of either more land revenue being assessed than was actually due; or uncultivated area be shown as cultivated; or changes made in the ownership of land; or correct measure distorted at the time of demarcation; or omission of the names of rightful claimants after

the death of a person. A comparison with the information of the second section will reveal that this is a negation of the *Patwaris* administrative obligations. The study group on agricultural policy [36, p. 36] has indicated that the impact of these practices falls mainly on the small holders.

In general the administrative drawbacks tend to intensify the effects of relative tax burdens referred to earlier in this section. In addition, the forceful exactions by the petty officials increase the reluctance of the farmers to pay taxes to the government.

4.3. *Built-in Flexibility of Agricultural Taxation:* The structure of the tax system should be such that an increasing proportion of the increments to national income is automatically siphoned into the public exchequer without involving additional tax efforts on the part of the government. The importance of flexibility is considerably increased under rapid growth and continuing inflationary conditions. Nurkse [32, pp. 142-52] has demonstrated convincingly that the objectives of economic development and avoidance of inflation place a heavy premium on taxes which respond readily to an expansion of production and national income. In West Pakistan [39, p. 3] the agricultural income at current factor costs increased by about 24 per cent over the period 1966/67 to 1969/70 whereas the corresponding increase in the tax revenues from agriculture was 31 per cent. The main part of this increment however, resulted from the increment of cultivated area (the tax base change), the upward revision of water rates by about 25 per cent and indirect taxes. Otherwise the land tax and water rate are basically inelastic with respect to income or price changes. Wald's statement [44, Pp. 52-53] reflects this tendency of land taxes, "Land taxes are conspicuously inflexible as revenue producers. Aside from reassessments which are infrequent, the only common source of responsiveness to changes in prices and production is the revision of tax rates".

In theory, any desired flexibility in revenue yields might be achieved through appropriate changes in the tax rates. However, the Pakistan government seems to be reluctant to follow this policy, as day-to-day tax-rate changes are politically difficult to enforce; land assessment revisions are costly; and by law the tax rates cannot be revised until a period of 20 years lapses between consecutive revisions. In addition the flexibility enforced through tax-rate changes cannot be taken as a perfect substitute for automatic flexibility. Automatic flexibility permits changes in taxes corresponding with changes in money incomes which are the only source of additional revenues, whereas flexibility enforced through tax-rate changes lacks this character and the additional revenues do not necessarily accrue from additional money incomes. In Dossar's terminology [4, Pp. 572-91] built-in-flexibility is a character of dynamic structure taxes which might be important for short-run stabilization policy and long-term growth whereas the basically inflexible system cannot be used for this purpose.

Some price elasticity in the land revenue system was introduced through the sliding scale system of land revenue assessment where land revenue is adjusted to the average trend of commodity prices in the previous twenty years. The system is regressive and role seems to be insignificant. For instance a 100 per cent increase in commodity prices in one year will bring only a 5 per cent increase in revenue. Moreover, the system seems to be inefficient. Perhaps more is spent on staff than is recovered from such changes.

4.4. *Scope for Additional Tax Revenue in Agriculture:* The scope for additional tax revenue hinges on the existence of an unrealized tax potential in the agricultural sector. During the period 1966/67 to 1969/70 the aggregate growth rate in money income of the agricultural sector was 24 per cent. According to the estimates of this study, the agricultural tax receipts over the same period as a per cent of 1966/67 money income in agriculture increased from 12.2 per cent to 17.7 per cent. In other words, only 5.5 per cent of the total 24 per cent increase in money incomes in agriculture was realized in the form of taxes. 18.5 per cent was left untouched in private hands. On this basis, one can conclude that there is a considerable potential for additional revenue. But, in the presence of large inequalities of income, a regressive tax structure and widespread tax evasions especially by higher income groups, the potential is probably not uniform for all groups of farmers. As was shown earlier, in spite of lower per capita incomes small farmers are overtaxed. The large land owners, on the other hand, have considerable tax potential which has not been exploited so far.

While taxable capacity does exist in the upper income brackets, there is little hope that this tax potential can be siphoned off under the current tax policy. From the point of view of tapping this surplus and for the implementation of additional taxation in agriculture in the future, there is urgent need for a reform of the current tax policy. An alternative policy should be flexible, equitable and efficient. Such a policy would promise large increases in tax revenues at current tax rates, and support Heller's conclusion that, "Underdeveloped countries are under no illusion that they can—or should—push their tax ratios of 10-15 per cent of national income to 30-40 per cent levels reached in advanced countries". [17, p. 81]. In Pakistan, for instance, if tax evasions were completely wiped out, the current tax revenue at existing tax rates would be greatly increased. If the effects of efficiency and equity are considered, which operate on a long-run basis, the scope for additional revenues is considerably increased.

Whether the additional taxation would affect private investments in agriculture depends on how the additional taxation is financed. (1) If the additional taxation is entirely consumption-financed so that voluntary savings remain unaffected, the aggregate savings, hence aggregate investment, of the economy will rise by the full amount of additional taxation. (2) If it comes partly from consumption and partly from private savings, the aggregate savings will rise but not by the full amount of the additional tax. (3) If the additional tax is paid purely out of private savings, the aggregate investment will remain unchanged because in this case the increase in forced savings is exactly offset by the decrease in voluntary savings. While aggregate investment may rise, it is not certain which pattern of financing will ultimately be adopted. Different individual responses should be expected, and the additional revenue will accrue from a combination of the three alternatives.

5. DEVISING AGRICULTURAL TAX POLICY FOR FUTURE: SOME PROPOSALS AND RECOMMENDATIONS

The previous section provided a critical examination of the existing tax system in agriculture. It may be inferred that existing tax policy is contradictory to the aims and objectives of national planning. It is therefore desirable to devise a system of agricultural taxation which is consistent with the planned targets of growth, reduction of income disparities, control of inflation and

self-reliance in financing of development programmes. These objectives, translated in term of public finance terminology, require that the agricultural taxation should (1) be made equitable and progressive, (2) ensure resource efficiency and be administratively feasible and (3) be income and price elastic. The aim of the present section, therefore, is to formulate a policy of agricultural taxation which satisfies these requirements with respect to the present agricultural situation in Pakistan.

5.1. *Review of Earlier Proposals:* So far five commissions have studied different aspects of agricultural taxation in Pakistan.⁶ The common recommendations were (1) the continuation of the sliding scale system of assessment, (2) the extension of the current land revenue system to unused land, (3) repeal of the legal bar restricting enactment of land revenue, (4) fixity of the period of resettlement, (5) variability of assesment according to zones and not according to individual plots, and (6) reorganization of the land revenue administration to eliminate scope for tax evasion. Three of the five commissions seem to be satisfied with the current and proportional rate-structure of the land revenue system. The other two, however, recommended a progressive rate structure. The Taxation Inquiry Committee of 1957 [33, Pp. 1-9] called for the replacement of the land revenue system with a general income tax levied by the central government with all the privileges and concession which are given to the general income tax payer. The study group on Agricultural Policy [36, Pp. 36-37] during 1970 proposed a graduated land tax policy (increasing tax rate as the size of the farm increases) to replace the current land revenue system. This study group proposed that holdings of 6.25 acres for irrigated areas and 12.5 acres for non-irrigated (rainfed) areas be exempt from tax.

The studies of individual economists are no less important in this respect. S.R. Lewis [25, Pp. 1-50], Javed Hamid [15, Pp. 422-47], M. Yaqub [49, Pp. 13-20.] and Nuruddin Chowdhury [7, Pp. 23-28] have made significant contribution to the subject. There seems to be general consensus among these writers as to the repeal of current land revenue, the desirability of progressive taxation, and the fixation of the tax base according to potential rather than actual value of output from agricultural land. While Lewis and Yaqub are indifferent between graduated land tax or universal income tax recommendations, Hamid has recommended the former and Chowdhury has proposed an extension of the central income tax to land owners' incomes. The two types of taxes, however, are basically the same. Hamid has described the tax rates in terms of land holdings whereas Chowdhury has done so in terms of farm incomes calculated on the basis of a uniform per acre income. Both have prescribed an exemption limit of 12.5 acres for irrigated area and 25.0 acres for rainfed area. Hamid believes that tax rate should be imposed on a self-assessed value of land provided by the owner.

5.2. *Evaluation of Proposals:* In spite of its concern, the government has not approved any of the proposals. Two factors mainly explain the government's inaction. First, opposition from the politically dominant landlord class may rule out implementation of such policies. Second, the recommended proposals may be intrinsically impractical.

⁶The five commissions or committees, referred to above, are (1) The Taxation Inquiry Committee of 1957, (2) Food and Agricultural Commission of 1959, (3) Fact-Finding Committee of Agricultural Taxation of 1963, (4) Commission on Taxation and Tariff of 1964, and (5) Study Group on Agricultural Policy of 1970.

Among the recommendations, the potential value land tax base, the assessment procedures, the progressive rate structure and the reorganization of administration are of recurring importance. The others are ignored.

A. *Potential Value land Tax Base:* The commissions and experts are in agreement on recommending a potential value land tax base, for a labour-surplus, landpoor country like Pakistan. Lewis [22, Pp. 467-68] has argued that if tenure arrangements are such that large holdings of land are inefficiently utilized, while there is surplus labour on small holdings, land tax based on or related to potential output would force owners of large holdings to use their land more productively in order to meet taxes. In a more recent study Lewis [25, p. 41] makes the point that, "Despite a fairly widespread agreement on the desirable features of some kind of tax on agricultural land related not to actual but to potential value of output, there has certainly been no comparable widespread move to introduce or to improve land tax system. The fundamental problems are political ones".

B. *Assessment Procedures:* The assessment of land is a necessary requirement before a tax policy can be formulated. The assessment must be carried out on zonal basis ignoring minor differences of productivity⁷. Zonal assessment completed on the basis of the average productivity of a tract, may be preferable to the self-assessed or detailed assessments as it requires less administrative staff and reduces the chances of fraudulent practices. This is particularly relevant for Pakistan where revenue administration is corrupt. Assessment based on self-assessed valuations or detailed valuations by assessors may suffer from personal bias and may not be representative or comprehensive. Many economists share this view. According to Wald [44, p. 170]. "To rely upon tax payer's declarations of the value of their holdings obviously is open to even more fundamental objections". Walker in a study of the United States [45, Pp. 156-57] has regarded detailed assessments as impractical and has concluded, "A comparison of land use under the soil conservation programme with land assessment classes shows that a large percentage of farm land was improperly classified for tax purposes".

C. *Progressive Rate Structure:* Despite the desirability of a progressive rate structure in agricultural taxation, as shown in section 4 of this study, it seems increasingly difficult for the recommended policies—graduated land tax or universal income tax (which takes the form of a graduated land tax when applied in agriculture) to achieve the goals without causing complicated problems. Some of the undesirable characteristics and effects of a graduated land tax policy are as follows:

(i) A graduated land tax means rising tax rates as the farm size increases. According to available estimates [35, Pp. 176-77] about 38 percent of the total farm area and 45 percent of the cultivated area is tenant operated. If tenant-cum-owner operated area is included, the respective percentages rise to 59 and 68 per cent. Most of the tenant operated farms are share-cropped. According to usual agreement a tenant gets 50 percent of the total produce and accordingly is liable to pay 50 per cent of the taxes. Under the prescribed rates as suggested

⁷The yield per acre of different major crops may be taken as a rough measure of average, productivity which roughly speaking is determined by soil classification, irrigation facilities types of crops grown and relative positions of different farms with respect to urban centres.

by Hamid [15, Pp. 422-47] a tenant cultivating 12.5 acres of land, of a landlord owning more than 150 acres, on a 50 per cent basis will be subjected to more than double the rate of tax on owner operated holdings between 50-150 acres, 11 times the rate on 25-50 acre holdings and 22 times the tax on 12.5-25 acre holdings. It is justifiable if a landlord, getting income from many tenants, is heavily taxed but as Wald puts it [44, p. 201], "There are probably no grounds for taxing tenant incomes, so small as to fall below a reasonable minimum exemption level for the tax". Though a graduated land tax policy provides exemption for owner cultivators of less than 12.5 acres, it fails to do the same for tenants of equal size and the progressive rate structure becomes regressive for the majority of the farming community.

(ii) The proponents of a graduated land tax policy tend to define subsistence farming in terms of farm area on the basis of which tax exemptions are to be granted. This, however, is inconsistent with a reasonable definition of subsistence farming. According to Wharton [48, p. 47] a subsistence farm refers to a self-contained and self-sufficient unit where all production is consumed and none is sold. This is to say that subsistence is as much a function of the number of persons dependent on farm output as it is of farm area. A 5 acre farm supporting one dependent may produce a significant surplus, whereas a 15 acre farm with 10 dependents may be a subsistence farm. Thus if exemptions are granted on the basis of farm area they may not fall into deserving hands.

(iii) Like a proportional land tax, a graduated land tax will still be price and income inelastic although Hamid and Chowdhury argue that their policies are price and income elastic. This is incorrect, as Dossar [9, Pp. 572-91] has concluded, "It is therefore not sufficient merely that the structure be progressive to ensure built-in-effect. Attention has to be paid to changes in the variables". According to Wald [44, p. 203], "The inelasticity which characterizes most land taxes is organic, that is to say, it comes from within the tax, as a result of the application of a stable tax rate to a tax base which is not kept current." Unless costly reassessments are carried out, which in Pakistan at best have been infrequent, there is little hope that a graduated land tax can be made price and income elastic.

(iv) Unlike a proportional land tax, a graduated land tax policy can be blamed for declining (in absolute terms) government revenues over time because of the operation of other factors. Preservation of the inheritance law, for example, may cause drastic reduction in revenue in the long run. Due to inheritance all holdings are subject to further subdivision so that the holdings over time get divided into smaller and smaller units. Since the tax rates on smaller units are comparatively low, a reduction in total revenues is inevitable. The extent of the reduction depends on the steepness of the progression and the rate of the subdivision. The steeper the progression and the higher the rate of subdivision, the more drastic will be the fall in total revenue. This phenomenon is accelerated by the fact that a heavier tax on large holdings will result in the disposal of the holdings over and above the capacity of a farmer to till the land. The higher tax rates on larger holdings coupled with the nonexistence of economies of scale in Pakistan's agriculture further accentuates this trend. In addition farmers on the margin paying higher taxes will surely choose to be in the lower tax rate brackets. Furthermore, the presence of the tax exemption limit may seriously erode the tax base. Under the prescribed exemption limit of 12.5 acres in irrigated areas and 25 acres in the rainfed areas,

only 60 percent of the total cultivated area and 64 per cent of the farm area will be taxable. As the subdivision of holdings will proceed, more and more farms will fall outside the taxable limit. This will narrow the tax base as against the principle of taxation of a broadening tax base.

(v) Neither can the graduated land tax be recommended for administrative reasons. A graduated land tax policy for its effective implementation requires an efficient and honest administration because the incentive to evade taxes increases as the progressive tax rates are introduced. Under the present situation of administrative skills, as was explained earlier, the success of a graduated land tax may be doubtful. Surrey's remarks [42, p. 499] in this respect are most appropriate, "The income tax may well be the favourite of the twentieth century but it demands twentieth century administration. There are many who urge these variants without any comprehension of the complex legal and accounting problems which they create".

From the above factors the impracticality of a direct progression⁸ in land taxes is obvious. In addition the failure of such taxes in different countries, where they had been in force, reflects their impractical nature. According to Heller [18, p. 224] the Soviet Union departed from progressive income tax in agriculture in 1953. Yugoslavia indicated its dissatisfaction with the progressive taxation of farmer's incomes and replaced it with a proportional land tax system. According to Bird [2, Pp. 386-92] the Australian experience, where a progressive tax on the value of unimproved land was introduced in 1910 and finally repealed in 1952, shows that a progressive rate tax on land is probably not as fiscally suitable for a poor country as a flat rate tax would be. In a mathematical study on India of the relationship between agricultural net income, size of holdings, etc., and land tenure, Kansal [24, Pp. 88-94] suggested that it will be more appropriate to treat the land revenue as proportional rather than regressive or progressive to these variables.

D. *Reorganization of Land Revenue Administration.* In Pakistan, more often than not, the term reorganization implies greater delegation of power to the revenue administration which, under the existing efficiency of revenue administration, means a greater loss of government revenue and higher burdens on the farming community. When the administration is corrupt and inefficient additions to revenue administration should be avoided to economize on resources. It might rather be advisable to eliminate the most inefficient staff. In public finance it can be made possible by devising a tax system which is simple to administer and provides for a close supervision of the revenue officers.

5.3. *Policy Recommendations:* We now turn to the purpose of this study, that is the formulation of a suitable agricultural tax policy for Pakistan. With consideration to our earlier discussion four types of reforms may be suggested which would assist in removing the defects of the existing tax policy and would lessen the anticipated ill-effects of earlier recommendations. In a nutshell the reforms aim at (i) the assessment procedures, (ii) the tax base changes, (iii) a proportional land tax and (iv) a tax on the marketed produce. The former two recommendations have already been given an explicit treatment and, therefore, only a summary will be included here. The later two reforms, however,

⁸Direct progression implies a graduated land tax and agricultural income tax because the progressive rate structure here is directly based on the size of holdings or farm size.

deserve an exhaustive discussion and hence form the main subject of this part of the section.

(i) *The Assessment Procedures and (ii) the Tax Base Changes:* The assessment of land should be on the average productivity of a particular zone instead of farm to farm assessments. The implementation of such assessments would not require extra initial costs as the assessment circles already exist.

The tax base for land tax and water rate should be extended and the liability of each farmer for tax payment should be determined according to individual owners holdings (potential output value) irrespective of whether the land is cultivated or uncultivated. Similarly the water rate due from each farmer should be calculated on the basis of ownership irrespective of crops grown or area sown. The change of the tax base would not involve appreciable, additional costs because the detailed cadastral records and maps, available with the revenue department, will be more than sufficient to satisfy the requirements of the tax base. The determination of water rate on this basis, however, will require that the irrigation water among farmers be distributed on the basis of owner's holdings for efficient water use. This might involve minor additional costs.

These two changes may eliminate tax evasions to a certain extent and lead to improvements in the revenue yields. The assessment at zonal levels would reduce the number of assessors relative to a detailed assessment. The tax base changes would eliminate the need for seasonal crop records and hence the need for maintaining canal and revenue *Patwaris*. This, in addition to reducing cost of administration to the government, will alleviate burdens on the farming community. Accounting problems and calculation inconveniences will be reduced as the yearly tax due from each farmer will be fixed unless ownership and tax rates are revised, which will only be infrequent. Each farmer will be cognisant of the tax in advance, hence tax evasions resulting from ignorance will be avoided. Improvements in tax yield are also possible because of a broader tax base. Since only 76 per cent of the total farm area in West Pakistan is presently cultivated, a change in the tax base will be capable of producing 31 percent more tax revenue from land tax alone under current tax rates. Increases in water rate revenue due to change in tax base cannot be quantified for lack of data.

Under the present agricultural tax policy small holders are subject to higher tax rates per acre than large holders because of the defective tax base. The tax base changes will at least provide for an effective proportional tax rate per acre and hence will help in alleviating the greater burden on small holders.

(iii) *A Proportional Land Tax and Water Rate.* It is recommended that taxes based on land, such as land tax and water rate, should be treated as proportional and should be taken as a minimum contribution to the exchequer from each farmer. A proportional land tax is preferable to the graduated land tax because, it will keep the base stable and relatively broad, will reduce temptations for excessive subdivision of holdings, will avoid the possibility of declining absolute tax revenues over time, and above all will be easy to administer. The present tax rates, including land tax and water rate (on the average Rs. 25.00 for first grade lands), may be taken as a minimum tax rate per acre and should be implemented on the basis of land owner's holdings.

The prescribed minimum tax rate on land holdings will induce farmers to use resources efficiently because, a tax rate of Rs. 25.00 per acre will constitute about 6 per cent average tax rate on agricultural income [15, p. 435] (Rs. 400 per acre) as against zero marginal tax rate of the land taxes. According to Musgrave [29, p. 242] an average tax rate higher than marginal rate will increase work effort. Moreover, the tax rate is heavy enough to penalise inefficient farmers. For instance, the burden of this tax rate will be doubled (about 12 per cent) if only 50 per cent of the farm area is cultivated. Again double cropping will be liable to about half the tax burden (about 3%). Better use of land and water will also ensure greater employment of labour and increased output in the agricultural sector.

The desirability of a proportional land tax may be gaged from Japan's experience. It is believed [43, Pp. 1-28] that the fixed land tax, although heavy and proportional, induced spurts in agriculture productivity in Japan, as the farmers were allowed to accumulate productivity gains.

(iv) *A Tax on the Marketed Produce.* A land tax is likely to be inequitable and income and price inelastic. In Japan a proportional land tax was used successfully because agricultural land was evenly distributed and the farm sizes varied between 0-7.5 acres. The income and price inelasticity was not a constraint as the tax was heavy and generated sufficient funds for development. Prices of agricultural commodities were stable. In Pakistan these three conditions are not satisfied. Therefore a progressive, and income and price elastic system of taxation is necessary. A tax on marketed produce is recommended. "In certain respects a tax on marketed produce has unique qualifications as an instrument of equitable taxation. . . . Moreover, the tax is responsive to changes in production and prices. . . . The incidence of such a tax, as distinguished from that of land revenue, will be appropriately heavy on the large land holders. While the small land holder, to the extent his crop is consumed and not sold by him will not have to bear the tax at all" Wald [44, p. 122]. In Pakistan the appropriateness of this so-called indirect progression⁹ is greatly enhanced as tenants will not be subjected to heavier tax rates than the large land holders. The tax base will progressively widen and the revenue will increase at the rate of growth of the marketed surplus plus the rate of increase in prices of agricultural commodities. To avoid additional administrative costs the tax may be implemented through local administrations which collect a similar tax (octroi) on agricultural commodities. The tax in addition will lessen tax evasion as the farmers will be accessible at the market place. Moreover corruption will be reduced as the revenue officers will be under public scrutiny.

An aspect of the tax on marketed produce is that it tends to decrease marketed output. The incentive for lower production is considerably countered by the presence of a heavy land tax, especially on unused lands. In addition, in less developed countries, the ill-effects of a marketed produce tax may not be so strong as to cause a significant effect on output. In fact, Wald has argued [44, p. 149], that "the average cultivator producing primarily for commercial market is not likely to be deterred by a marketing tax even though the rate is as high as, say 12.5 per cent, (which is the rate currently in effect in Iraq). His

⁹The progression is essentially indirect, since the proportional rate on marketed surplus is converted into a progressive rate per acre because of relatively higher marketed surplus of the large farmers.

livelihood depends on how much he is able to produce and sell and the imposition of a tax on his sales, is as likely to spur him to work harder as it is to deter him". It is difficult, for lack of statistics, to calculate what rate of tax on marketed produce will be most appropriate for Pakistan. However a beginning may be made with a low rate of tax.

SUMMARY OF RECOMMENDATIONS

The current land revenue system and water rate policy have been found objectionable on many counts. Most economists have been dissatisfied with agricultural taxation in West Pakistan. A graduated land tax policy or direct progression has been recommended. Direct progression, however, suffers from drawbacks which may be serious in actual implementation. The present study has recommended an alternative agricultural taxation policy which minimizes the ill-effects of a graduated land tax policy.

Four specific recommendations of the policy are important: (i) the potential value land tax base, (ii) the assessment procedures, (iii) a proportional land tax, and (iv) a tax on the marketed produce. The four proposals together ensure a progressive tax rate structure with respect to land holdings and income from land, efficient use of the agricultural resources, improvements in the administrative efficiency through the simplicity and economy of the tax system and flexibility of the tax system with respect to agricultural incomes and prices. The recommended policy will replace the current sliding scale system of assessment, eliminate recurring and costly assessments, obviate the fixation of resettlement periods and legal bar restricting the land revenue enactment. In short the policy seems to be most consistent with the conditions in Pakistan and the long term requirements of national development.

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