The Performance of Village Markets for Agricultural Produce: A Case Study of Pakistan

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Introduction

The role of marketing in the allocation of resources within the agricultural sector is an important one. This role consists in translating the market demand for various agricultural crops into profit incentives for the farmers. The marketing system that does not adequately perform the task of transmitting the profit signals from the consumers to the producers results in misallocation of resources and less than optimal application of inputs in the production of agricultural crops.

Despite the importance of the marketing system, the analysis of the market structure and the dynamics of agricultural marketing have received little attention in the developing countries. Several recent works have explored the efficiency aspects of contemporary marketing systems [7,9]. A recent case study of the marketing system in Brazil has clarified some of the interrelationships between marketing and development [23].

Literature on marketing in Pakistan is scarce and deals mostly with the description of the institutional system [2, 18,19,20,21]. No attempt is made to test hypotheses regarding efficiency of the agricultural markets. The evolution of the marketing system is not systematically traced.

The Government of Pakistan has intervened in the markets for agricultural crops quite frequently during the past twentyfive years. Compulsory procurement, fixation of floor and/or ceiling prices, zoning of surplus and deficit dis-

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tricts, fair price distribution and rationing have all been used singly or simultaneously in Pakistan. In addition, the government has provided rural areas with roads, credit and a legal framework for the conduct of business affairs. All these government policies have affected the performance of the private markets. A knowledge about the performance of these markets is needed, therefore, to evaluate the government policies in the field of agricultural marketing.

This paper intends to trace the nature of marketing change that accompanied the process of structural transformation in the economy of Pakistan since 1947. The paper also analyses in some detail the price formation processes in village markets in Pakistan.

In 1947, West Pakistan was poor and predominantly agricultural. By 1970, a modern economic structure, urban and industrial in base, had been established. In the 1950's total gross national product growth barely kept up with population increase. The modern sector grew considerably faster than the rest of the economy. In the decade of the 1960's, agriculture also started growing at a rate higher than that of the population growth. During the period of structural transformation, substantial demands for marketing services were generated while the factors shaping the marketing system underwent considerable modifications. The adaptation of agricultural marketing system to changes in rural economic environment is a fruitful area of research and can shed light on relationship between marketing and development.

Marketing System in British India: An Oligopsony

Agricultural marketing in the British India was constrained by two dominant characteristics of the scene. Road, rail and other communication facilities were unsatisfactory for most regions [6]. Due mainly to poor transportation system, local oligopsony was the prevalent market structure for the interior assembly markets. Due to high transport costs and the meagre market information available to farmers, spatial arbitrage was quite limited. Entry of new buyers of agricultural produce was also no threat to the local oligopsony as the cost of such entry into trade was quite high.

Local and regional oligopsony was strengthened by the merchant-moneylender-middleman system of agricultural financing in the British India [4]. The rural credit and banking network was rudimentary. Due to high administrative costs and risks, banks did not lend directly to farmers. Some minimal financing was provided to urban traders who, in turn, lent to farmers. Due to the absence of a public institutional credit mechanism, moneylender was a common feature of the rural scene. In the 1920's, a study revealed an enormous extent of rural indebtedness in the Punjab. It was pointed out that peasants in the Punjab "are born in debt, live in debt, and die in debt" [4, p. 279]. The moneylender was also a produce buyer and a merchandizer. A normal condition of the loan was a commitment to sell the produce to and buy the merchandise from the moneylender-cum-merchant-cum-middleman. It is often maintained that the triple dealer, who usually belonged to the Hindu or Sikh community cheated peasants on all three aspects of the bargain.

The marketing system was segmented into regional sub-systems and was characteristically oligopsonistic. The peasant obtained credit at high rates of

interest, sold his produce cheaply and bought his merchandise dearly. The marketing margins were high due to roundabout market channels and were inflated by oligopsony profits.

Break-up of Oligopsony in Pakistan

The partition of the British India in 1947 and the subsequent developments in the region comprising Pakistan drastically changed the agricultural marketing system. The main factors responsible for the establishment of oligopsony in the British India were made ineffective by the partition and government policies in the fields of transportation and rural credit.

A. The Triple Dealer and the Partition

As noted in the previous section the moneylender-merchant almost always belonged to the Hindu or the Sikh community. Due to the communal nature of the partition, all members of the money-lending class migrated to India. This migration had four effects. *First*, all debts owed to "the moneylender" by the peasantry were wiped out. The previously indebted peasants became free agents and could choose the market outlets for their surlpus produce based on profitability considerations. *Second*, the departure of the entire trading class led to a disequilibrium in agricultural trade. The profits in such trade were high and they attracted new people to the trading profession. The response of the potential entrants to trade was quick and massive. *Third*, the new entrants to the agricultural trade came from diverse backgrounds. Wealthy landowners started assembling the produce for sale in the wholesale primary markets. The Muslim migrants from India were compensated for properties left in India in the form of titles to the Hindu property left in Pakistan. Some of the Muslim migrants were given possession of the Hindu shops and, thus, entered agricultural trade. The former employees of the Hindu traders also started business on their own account after their previous employers left the country. The new traders, thus, came from very diverse backgrounds. It was not easy for them to agree on a common price policy. *Fourth*, the triple functions of moneylending, produce buying and merchandizing were not combined in one person in the new set-up. The main reason for the separation of functions lay in the attitude of new entrants towards different professions. Merchandizing was considered a lowly profession by the wealthy land owners. Moneylending, prohibited by Islam, was usually looked down upon by the society. Produce buying was the least objectionable outlet for surplus investible funds. On account of all these factors, the middleman clearly was no more in a position to reap oligopsony profits.

B. The Government Policies Since 1947

The separation of moneylending, produce buying and merchandizing was an important element in the break-up of oligopsony in Pakistan. Perhaps more important towards that end were government policies in the fields of transportation, credit and rural development. Pakistan actively pursued an import-substituting industrialization backed by considerable investments in the economic infrastructure [16].

Transportation

The role of transportation in determining the market structure is important as the cost of transport between two markets determines how large the

price difference between the two markets can be without attracting shipments between the two markets. Cheap and easily available transportation is an important barrier in the maintenance of oligopsony in any particular region.

Table I presents some data on the growth of transport facilities in the rural areas of Pakistan during the period 1947-70. During this period, rail freight more than doubled, the road mileage under the better quality roads also doubled, and the number of trucks increased from 832 to 34,871. The rapid spread of tractors in the late 1960's was important in the intensification of competition in the rural markets. The spread of tractor-trailers increased the selling alternatives to farmers as many trucker-middlemen bought the produce from farmers in village markets and sold the produce to the traders in wholesale primary markets.

Table I

Some Indicators of Transport Facilities Provided to the Rural Areas in West Pakistan Since 1947-48

Year	Rail Freight Carried (Million Ton Miles)	Road Mileage		Sub Total	Trucks	Tractors
		High Type[a]	Low Type[b]			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1947-48	2,349	5,053	8,768	13,821	823	NA
1948-49	2,339	5,433	10,039	15,472	1259	,,
1949-50	2,462	5,624	10,102	15,726	1991	,,
1950-51	2,718	6,150	10,176	16,326	3020	,,
1951-52	3,048	6,654	10,498	17,152	4266	,,
1952-53	3,556	7,001	11,278	18,279	6026	,,
1953-54	3,419	7,444	11,176	18,620	8054	,,
1954-55	3,329	7,980	11,122	19,102	12694	,,
1955-56	3,506	8,038	11,386	19,424	14004	,,
1956-57	3,966	8,238	11,186	19,424	14505	,,
1957-58	4,205	8,412	11,012	19,424	16329	,,
1958-59	4,441	8,690	10,243	18,933	17129	,,
1959-60	4,686	8,772	10,404	19,176	18352	,,
1960-61	5,074	8,827	11,554	20,381	20472	,,
1961-62	4,953	9,002	11,988	20,990	23618	,,
1962-63	5,263	9,327	11,680	21,007	25476	,,
1963-64	5,857	9,445	11,952	21,397	26096	,,
1964-65	5,843	9,971	11,787	21,758	27954	1,469
1965-66	5,599	10,934	11,902	22,036	31203	5,059
1966-67	5,855	10,456	8,478	18,934	30683	7,208
1967-68	6,042	10,704	8,974	19,678	33718	10,777
1968-69	5,486	10,926	8,077	19,003	35345	16,558
1969-70	5,175	10,306	8,956	18,902	34871	20,715

Source: [4, p. 135] for Col. 2
[4, p. 136] for Cols. 3, 4 and 6

[a] Roads having cement concrete surface.

[b] Roads generally of stones, bricks, grand or ordinary earth roads with drainage structure provided.

Credit

It was pointed out in a previous sub-section that the merchant-moneylender system in the British India was an important factor in the evolution of oligopsony in the village produce markets. It was further pointed out that the communal nature of the Partition in 1947 forced an out-migration of moneylenders to India.

Table II gives a comparative picture of the sources of rural credit in Pakistan and India after 1947. The demise of moneylender in Pakistan is quite obvious while the moneylending class in India is still the major source of credit. The three combined categories of shopkeepers, marketing intermediaries and moneylenders accounted for only 6.2 percent of credit supplied in Pakistan. It is obvious that the power to collude was drastically reduced in the marketing system after 1947.

Table II

Sources of Rural Credit in the Punjab (Pakistan) and India after Partition (1947)

	Source	Board of Economic Inquiry Punjab (%)	Socio-Economic Research Project Punjab University (percentage)	All India Rural Credit Survey (%)
		1951	1957	1954
1.	Relatives & Friends	63.2	62.8	14.2
2.	Well-to-do rural people/landlords	16.9	0.2	1.5
3.	Cooperatives	13.2	14.3	3.1
4.	Government	2.9	13.4	3.3
5.	Shop-keepers	2.5	0.4	5.5
6.	Marketing intermediaries	—	4.7	—
7.	Moneylenders	1.3	1.1	69.7
8.	Other Sources	—	3.1	2.7

Sources: Table adapted from [2, 11 and 12]

The vacuum created by the departure of the moneylender was not filled by the institutional sources of credit. The cooperative credit societies and the governmental credit institutions supplied only 17 percent of the total credit used in the rural sector. The credit societies were deprived of the services of the skilled managers who migrated to India in 1947-48. The government was slow in recognizing the crucial role played by credit in the development of the agricultural sector. The gap left by the moneylender was filled by relatives, friends and landlords. This source of credit does not lead to oligopsony. Their increased importance was a factor behind the extinction of monopsonistic tendencies in the marketing of agricultural crops.

By the late 1950's, the government had recognized the critical role of agricultural credit in financing capital investment in agriculture. Various specialized banks and institutions were designed for the specific purpose of

advancing loans to farmers directly or indirectly through increased funding for credit societies. The Agricultural Development Finance Corporation (ADFC) was set up by the Central Government in 1952. The Agricultural Bank of Pakistan (ABP) was established in 1956. These two banks were merged in 1961 into the Agricultural Development Bank of Pakistan (ADBP). The increasing importance of the government in the credit field is reflected in Table II where the share of government in the total supply of credit rises from 2.9 percent in 1951 to 13.4 percent in 1957.

Table III shows the total credit supply by the institutional sources to the agricultural sector over the period 1947-1970. The spectacular rise in lending by the specialized banks in the 1960's is clearly brought out in the table.

Table III

Credit Flow to the Agriculture Sector in West Pakistan from Institutional Sources of Credit

(in Rs. Million)

Year	Agri. Dev. Bank of Pakistan	State Credit known as *Taccavi* loans	Cooperative Societies	Total Credit
1	2	3	4	5
1947-48	Nil	4.7	55	59.7
1948-49	Nil	15.7	105	115.7
1949-50	Nil	3.5	87	90.5
1950-51	Nil	7.2	70	77.2
1951-52	Nil	2.6	70	72.6
1952-53	0.08	3.3	70	73.4
1953-54	0.60	6.8	87	94.4
1954-55	1.1	3.2	71	75.3
1955-56	1.0	5.5	48	54.5
1956-57	1.7	6.1	47	54.8
1957-58	3.6	11.5	53	68.1
1958-59	5.7	15.9	61	82.6
1959-60	24.8	16.1	88	128.9
1960-61	30.9	13.7	107	151.6
1961-62	46.9	11.2	99	157.1
1962-63	40.7	9.1	92	141.8
1963-64	46.7	11.2	76	133.9
1964-65	40.5	29.3	68	137.8
1965-66	68.0	11.2	71	150.2
1966-67	100.5	9.6	71	181.1
1967-68	106.2	11.1	270	387.3
1968-69	82.1	11.2	100	193.3
1969-70	91.3	9.4	73	173.7

Source: [10, p. 211] for Cols. 2 and 3, and [10, pp. 218-223] for Col. 4

The credit needs for agriculture were increasingly met by specialized agencies. The terms of loans were less onerous than the terms offered by the

moneylender in the years before 1947. The effect of cheap transport and credit was to break the oligopsony in rural Pakistan as it existed in the period prior to 1947.

Methodological Framework

The oligopsony (merchant-moneylender) model implies that price rise between the seasonal trough during the harvest months to the peak in the off-season would be larger than when markets are competitive. The hypothesis that agricultural markets in Pakistan were oligopsonistic in the period before 1947 and competitive afterwards was suggested in the previous two sections. An empirical test of the hypothesis would require seasonal price data for the two periods. These data are not available. A related but partial hypothesis is tested for agricultural markets in Pakistan. It is generally maintained that the prices are unduly low in village markets. This phenomenon of underpricing is explained by factors such as indebtedness of the cultivator to the village trader-moneylender, lack of knowledge about market prices by the cultivator, poor transport facilities linking villages to markets and an immediate and urgent need for cash. The relative influence of these factors is mostly a matter for empirical verification in any particular situation. In this section, some evidence regarding the extent of competitiveness in the agricultural markets in Pakistan is presented.

Specific Hypothesis

We would test the following specific hypothesis in the context of agricultural produce marketing in this section:

(1) The market structure in village and wholesale primary markets in Pakistan is competitive.

(2) All markets of individual crops are closely related with each other. This relationship is measured by the degree of correlation between the prices in different markets.

(3) Because of the competitive nature of trade in agricultural commodities, prices in villages and *mandi* towns do not exceed the transport costs. Transport costs are defined to include the market charges levied on sellers in the wholesale primary markets.

(4) Because of the competitive market structure, marketing margins for farm products are not excessively high and remain relatively constant when the wholesale price changes due to increased demand for farm goods.

(5) Due to a limited capacity to wait, the cultivators sell a major portion of their marketed surplus in the immediate post-harvest period.

(6) Due mainly to the glut in market supply at harvest time, the village prices are unduly depressed during the harvest season.

(7) The decision to sell in the village or in the *mandis* is guided by the level of indebtedness on the part of the cultivators.

(8) The decision to sell in the village or in the *mandis* is influenced by the transportation facilities between the villages and the market towns.

(9) The decision to sell in the village or in the *mandis* is influenced by the nature of the development of the marketing system in village and town markets.

Methodology

This hypothesis is examined in relation to five commodities: wheat, paddy, *gur*, toria and cotton. Wheat is the major cereal in Pakistan. It is a subsistence crop in the sense that peasants consume a large portion of the crop themselves. Rice is mainly grown for the market though a part of it is retained by peasants for domestic consumption. *Gur* is a type of raw sugar which is processed on the farms by the peasants. Toria is grown partly for the market and partly for feed on the farm. Cotton is a pure cash crop. These crops together account for a substantial part of the total agricultural production in Pakistan.

Data

Time series data on prices in some of the wholesale primary markets and terminal markets for different agricultural commodities are available [14]. These data can be analysed for determining the interrelationships in the price formation processes in these markets[1]. The price data for the village markets where most farmers sell a large proportion of their marketed surplus is not available, however. Since the main interest in this paper is the interrelationship between the prices in the village and wholesale primary markets, not much use could be made of the time series price data. As an alternative and mainly as a first approximation, the author has relied on a cross-section study of the prices for the village and *mandi* town markets [1, 3].

The survey from which the price data are taken for this study was conducted over a period of two years, i.e., 1965-66 and 1966-67. West Pakistan was divided into two zones. The Southern Zone, comprising administrative divisions of Multan, Bahawalpur, Khairpur, Hyderabad, Quetta, Kalat and Karachi, was surveyed during 1965-66. The Northern Zone, comprising administrative divisions of Sargodha, Lahore, Rawalpindi, Dera Ismail Khan and Peshawar, was surveyed during 1966-67.

One district from each of the divisions was selected. The divisions of Kalat, Quetta and Karachi were dropped from the universe as these areas were unimportant from the viewpoint of agricultural production and marketing. The districts selected were Multan, Rahimyar Khan, Sukkur, Hyderabad, Lyallpur, Sheikhupura, Gujrat, Dera Ismail Khan and Peshawar.

With each district, a number of wholesale markets were selected for further collection of data. In all 26 markets were selected. Within each market, five percent of the commission agents were selected randomly for recording the price data.

One village from the market area of each of the wholesale market was selected for drawing a random sample of 45 farmers from each village. The data on marketed surplus, the price obtained in the village market and various other characteristics of the farmers were recorded.

[1]For a skillful use of these data for the study of Indian experience see [9].

The prices in the selected villages and the wholesale markets were recorded on a daily basis. The monthly village and wholesale market prices were computed as a weighted average of the daily prices. The weights were the quantity traded in each of the market on each day.

Structure of Village Markets: Some Quantitative Results

Market Integration in Pakistan[2]

The degree of interrelation in the price formation process between village and wholesale primary markets is one criterion for judging the competitiveness of the market structure in Pakistan. If the price developments run parallel on the two markets which are connected by the normal flow of goods between them, one could say that the two markets were characterized by a reasonable degree of competitiveness. This degree of competitiveness can be measured by obtaining correlation coefficients between the price movements in the two markets.

The correlation between price movements of a particular commodity in any two markets will equal one under conditions of perfect competition. However, the degree of correlation would be less than one in any real-world situation. The reason for this is that even though no single trader may be in a position to influence prices by his actions, the conditions of perfect mobility, perfect knowledge and perfect homogeneity of products do not hold in any actual case.

Perfect mobility is never achieved due to transport cost. Due to the existence of these costs, the prices of the same goods can move within the range of plus or minus the transport cost and not attract cross-shipments of goods between the two markets. The greater the transport cost, the larger the range within which the prices can fluctuate without attracting transfer of goods and the lower the correlation coefficient between the price movements. This large transport cost may be due to long distances or transport bottlenecks. Traders do not have control over these barriers and any divergence in prices between two markets due to imperfect mobility would not be removed unless cheaper transport is made available.

A low correlation between price movements in different markets may partly be due to a lack of the grading of the agricultural produce in the developing countries. The price data as recorded in the two surveys and in official price data do not normally refer to any particular variety of the product. In the developing countries, there are numerous varieties of each of the commodity being grown and sold. Due to this inherent possibility of comparing prices of the same product but different varieties, the relationship between price movements may be less than perfect.

Some price differences between two markets may result and persist if the knowledge of the market conditions is poorly disseminated. If the trader or farmer is not aware of the price differences in two markets, he may not sell in the most profitable market. Incomplete knowledge can result in an inadequate

[2]For the definition of the concept of 'Market Integration' see [1]; for a critical discussion of the concept see [24].

flow of goods and result in price differences that are greater than transport costs.

Due to the transport cost, lack of standard grades and poorly disseminated knowledge, the price movements of the same commodity may not be perfectly correlated despite the fact that nonmonopsonic tendencies exist in these markets. If monopsony exists in any of the markets, the correlation between price movements would be reduced further.

The transport cost, dissemination of knowledge and errors of measurements due to lack of standard grades are all positive functions of distance between two markets. Consequently, it is expected that the correlation coefficients between village and primary market prices for the same region would be quite high and decline to somewhat lower levels for the price movements for different primary markets in Pakistan.

Table IV presents the correlation coefficients between monthly village and wholesale primary market prices for six commodities in different districts. Tabel V shows the frequency distribution of correlation coefficients between village and primary market prices and between primary and primary market prices in Pakistan. The number of correlation coefficients computed for primary-primary markets is lower than that computed for village-primary markets. The reason is that the survey was spread over two years. For village-primary market analysis in each district the observations in different districts in different years could be treated together in the analysis but for interrelationships between primary markets only the observation for the same year could be taken into analysis.

Table IV

Correlation Coefficients Between Monthly Village and Mandi *Price Series in Pakistan for Different Commodities*

District	Wheat	Cotton	*Gur*	Oil Seeds	Gram	Paddy
Multan	.8362	.9889	.9628	.9959	N.A.	N.A.
Lyallpur	.9994	.9997	.9996 .9991[a]	.9975	N.A.	N.A.
R. Yar Khan	.9903	.9910	.9956	.9701	N.A.	N.A.
Sheikhupura	.9998	N.A.	.9991	N.A.	N.A.	.9999
D.I. Khan	N.A.	N.A.	.9901	N.A.	N.A.	N.A.
Peshawar	N.A.	N.A.	.9994	N.A.	N.A.	N.A.
Gujrat	.9999	.9923	N.A.	.9996	N.A.	.9876
Hyderabad	.8242	.9970	.9953	N.A.	N.A.	.9758
Sukkur	.9803	N.A.	N.A.	.9986	.9598	.9859

Sources: The price series are taken from the two surveys by the West Pakistan Agricultural University [1, 3].

[a] This coefficient is applicable to *Desi* sugar.

Table IV shows very high level of correlation between village and primary market prices for each of the commodity. Ninety percent of the correlation coefficients are higher than 0.95 while 73 percent of the correlation coefficients are higher than 0.98. There is no correlation coefficient lower than 0.80.

The table also shows high correlation for prices between different primary markets. No terminal market was included in the analysis. There are shipments between village and primary markets and between primary and terminal markets. Not much of shipment of goods takes place between different primary markets. The spatial arbitration between these primary markets takes place indirectly through primary-terminal market relationships. About 75 percent of the correlation coefficients are higher than 0.90. About 55 percent of the correlation coefficients are higher than 0.95. These results indicate the presence of a closely integrated marketing system in Pakistan. They also provide a strong support for the hypothesis of competitiveness in the marketing of agricultural products in the village and wholesale primary markets.

Table V also presents the relevant data for the interrelationships between primary-primary and primary-terminal markets for India. A comparison between Pakistan and India reveals a higher degree of market integration[8] in Pakistan. The higher degree of market integration in Pakistan can be explained by the relative absence of moneylenders in Pakistan (see Table II) and a lesser degree of intervention by the government in agricultural marketing in Pakistan as compared with India.

Transport Costs and Intermarket Price Differences

If two markets for one particular commodity are competitive in structure and there is no restriction on movements of the commodity between the two markets, the price of the commodity between the two markets would differ from each other by an amount equal to the transport cost. An empirical test for the competitiveness requires a knowledge of the price series in the two markets and the size of the transport cost.

Data on the price differences between village and primary wholesale markets for five commodities in Pakistan have been compared. The sellers of the agricultural produce in the primary wholesale markets have to depend on certain market functionaries to enable them to sell their produce. The sellers have to pay certain charges for the services of these market functionaries. These charges, along with the normal transport cost, are defined as the transfer cost between the village and primary wholesale markets.

Data on the tansfer cost between the village and wholesale markets in Pakistan are extremely scarce. Part of this transfer cost is the expenses incurred on account of the transportation of the produce. This cost is a function of the distance between the village and the primary markets. The other part of this transfer cost is the remuneration paid to the market functionaries.

[8]The level of market integration in Pakistan is underestimated relative to the Indian case. As pointed outed by Peter Timmer, the correlation coefficients are artificially high in the Indian case. Since the data in this study is taken from a cross-section survey, this bias is not present in our calculations.

Table V

Frequency and Percentage Distribution of Correlation Coefficients between Village-Primary and Primary-Primary Market Prices in Pakistan and India

Correlation Coefficient	Village Primary Markets in Pakistan			Primary-Primary Markets in Pakistan			Markets in Pakistan			Markets in India		
	Frequency	Percentage	Cumulative Percentage	Frequency	Percentage	Cumulative Percentage	Frequency	Percentage	Cumulative Percentage	Frequency	Percentage	Cumulative Percentage
Less than .70	0	0.0	100.0	0	0	100.0	0	0	100	1	1.0	100.0
.70—.80	0	0.0	100.0	4	20.0	100.0	4	8	100	14	12.0	99.0
.80—.90	2	6.6	100.0	1	5.0	80.0	3	6	92	35	30.0	87.0
.90—.95	1	3.3	93.4	4	20.0	75.0	5	10	86	34	29.0	57.0
.95—.97	5	16.6	90.1	4	20.0	55.0	9	18	76	( )	( )	( )
.98—.99	9	30.0	73.5	5	25.0	35.0	14	28	58	(33)	(28)	(28.0)
.99—1.00	13	43.5	43.5	2	10.0	10.0	15	30	30	( )	( )	( )
TOTAL:	30	100.2		20			50			177		

Sources: (1) Table IV of the present study for information for Pakistan.
(2) [1] for Indian data.

Table VI presents some data regarding the marketing costs in the regulated and unregulated markets in Pakistan during 1955-56. The range of the marketing costs for 100 rupees worth of the produce sold varies from Rs. 5.17 to Rs. 10.21. The mean value of the marketing cost was Rs. 8 per 100 rupees worth of produce sold. Since transport costs between village and primary markets are ignored in the calculation, the values of marketing costs as presented in Table VI underestimate the magnitude of transfer costs between primary and village markets.

Table VI

Market Charges in Regulated and Unregulated Markets per 100 *Rupees of Produce Sold in Pakistan during* 1955-56

(in Rupees)

Charges	Unregulated Market		Regulated Markets	
	Minimum Charges	Maximum Charges	Minimum Charges	Maximum Charges
Commission	1.00	1.56	0.81	1.00
Brokerage	0.13	0.19	0.08	0.22
Weighing	0.13	0.34	0.15	0.22
Polledari	0.15	0.34	0.06	0.27
Changrai	0.15	0.15	0.10	0.22
Rolai	0.14	0.19	0.08	0.15
Karta	1.25	1.56	1.00	2.50
Dryage	2.50	3.75	1.56	3.75
Other Charges	1.25	2.13	1.33	1.58
Total Charges	6.70	10.21	5.17	9.91

Source: [8]

Table VII presents a frequency distribution of the differences between the prices in village and primary markets for five crops. The magnitude of price differences in two markets is divided into four classes. The first class contains cases where the percentage difference between village and primary markets is less than five percentage points. The three remaining class intervals similarly tabulate other cases of price differentials between two markets.

Price differences between the two markets are consistent with the transfer costs in the cases of wheat, paddy, cotton and toria. In the case of *gur*, 34.5 percent of the time the price difference was greater than the market charges. Had we considered transportation cost, the price difference would have been greater than the transfer cost only in rare cases for *gur* as well. The comparison of the prices with the transfer cost strongly supports the hypothesis of high competitiveness in the agricultural trade.

Table VII

Frequency Distribution of Differences between Village and Primary Market Prices for Different Commodities in Pakistan

Commodity	Frequency (No. of months)	Precentage Difference between Village and Primary Market Prices				Total No. of Months
		Less than 5%	5% to 8%	8% to 10.50%	10.50% and above	
Wheat	Absolute	9	42	5	0	56
	Percentage	16.0	75.1	8.9	0	100
Gur	Absolute	2	9	25	19	55
	Percentage	3.8	16.4	45.3	34.5	100
Paddy	Absolute	3	10	3	0	16
	Percentage	18.7	62.6	18.7		100
Cotton	Absolute	26	1	0	0	27
	Percentage	97.3	3.7	0	0	100
Toria	Absolute	21	5	0	0	26
	Percentage	80.8	19.2	0	0	100

Source: [1 and 3] for the basic data.

Marketing Margins For Farm Products and the Market Structure in Pakistan: Some Empirical Results

There is a general belief in Pakistan, as in many other developing countries, that the average trade margins in the field of agricultural trade are unduly high and contain appreciable monopoly profits. There are two aspects to this kind of belief that must be distinguished. First, the social desirability or undesirability of these profits must be appraised. Second, there is an empirical question in measuring correctly the level of the monopoly profits. The accurate determination of the marketing profits by subtraction of marketing costs from trade margins miscarries in many cases due to lack of reliable cost data in the developing countries. In this subsection we would present a method to find out whether the average trade margins contain appreciable monopsony profits without getting into the marketing costs. We would present the results of this investigation for agricultural marketing in Pakistan.

There are two views about the usefulness of excessive profits derived mainly from the static equilibrium theory and from the dynamic theory of economic development. The partial consideration of an individual market leads to the conclusion that excess profits lead to higher consumer prices and lower producer prices and to lower turnover as compared to the case when pure competition prevails. The dynamic view of the profit holds that such profits attract new competitors who, with imitation or innovation, set a dynamic process in motion. The short-term monopoly profits are contested and elimi-

nated in the long run. In this sense, the monopoly profits are an important stimulus for rapid economic development.

The ultimate view of the role of the profits depends on the priority that one attaches to the necessity of economic development. However, one must know the probable response of the potential competitors to the high levels of profits. Long-term uncontested monopolistic excess profits are a dead loss to the society unless they raise savings. In Pakistan, quite a few studies have shown the energetic response by farmers and industrialists to the market incentives [5, 10]. It was shown in a previous section that after the departure of the Hindu middleman in 1947 from Pakistan, the high profits in agricultural trade attracted a substantial number of people. The profits margins were reduced and the trade was carried on efficiently. In view of this evidence, a case for temporary monoply profits to induce rapid development in the selected sectors can be made in Pakistan.

The empirical question of the determination of the extent of the monopoly profit in agricultural trade cannot be handled directly as the reliable data on marketing costs are not available in Pakistan. An indirect test of the existence of the excessive monopsony profits was suggested by Ruttan who presupposes that changes in the consumer prices have a slight effect on the marketing costs of a product [22]. If the margin remains relatively stable during changing prices, it means that the dealers pass on consumer price changes fully to the producer, i.e., they are not in a position to use increases in demand to expand their profit margins. The independence of trade margins from the consumer prices or wholesale prices can be empirically tested by employing regression analysis.

The crucial assumptions behind the reasoning by Ruttan are that there are no scale economies in the different marketing processes in the developing countries and the supply of marketing services in these countries is highly elastic. Both these assumptions are likely to be valid in Pakistan. The physical storage facilities in the village and wholesale primary markets in Pakistan are relatively unspecialized, the marketing processes are relatively labour-intensive, the capital financing is easily available and there is abundant labour supply. It seems likely that scale economies are limited and the marginal cost of providing marketing services would be constant over a considerable range of business transacted.

A priori discussion of the validity of assumptions in any case is helpful but not conclusive. We present the estimated relationship between the average trade margin and the quantity of the business transacted in the wholesale primary markets for five commodities in Pakistan. Table VIII presents the relevant regression equations.

The proportion of variance in the trade margin explained is quite low in case of wheat, cotton, toria and *gur*. The R^2 in the case of paddy is .42, however.

The coefficients of the trade margin on the volume of business transacted for wheat, cotton and toria are not significantly different from zero. The coefficient for paddy is significant and negative and for *gur* it is significant at 10 percent and positive. The evidence shows that for three commodities the

Table VIII

Regression Equation of the Gross Marketing Margin on the Quantity Traded in Wholesale Primary Markets for Different Commodities in Pakistan

Crop	Regression Equation $M_t = a+b\,Q_t$	R^2	Degrees of Freedom
Wheat	$M_t = .06062 + .00467\ Q_t$ (.00282)	.05	53
Paddy	$M_t = .07566 + .00113\ Q_t$ (.00035)	.42	13
Cotton	$M_t = .03476 + .00015\ Q_t$ (.00030)	.02	24
Toria	$M_t = .04185 + .00015\ Q_t$ (.00382)	.01	23
Gur	$M_t = .09291 + .00201\ Q_t$ (.00116)	.05	52

Notes: (1) $M_t = \dfrac{P_M - P_b}{P_M}$ where P_M is the wholesale market price and P_b the village market price.

(2) Q_t is the quantity traded in the wholesale primary markets.

(3) Figures in parentheses are the standard errors of coefficient.

marginal cost of providing marketing services is constant and unrelated to the volume of business transacted. This is a reflection of the abundant supply and a probable existence of unutilized capacity in the marketing processes of these commodities. For the marketing of *gur*, a positively inclined supply curve of the marketing services is indicated. For paddy, there is some evidence of the scale economies. Both *gur* and paddy require special facilities for storing and processing. *Gur* loses weight and deteriorates in quality if not stored properly. Paddy requires milling facilities for husking. For other crops that do not need special facilities there is no evidence of scale economies and the marginal cost of marketing services is constant.

With no significant scale economies and with an elastic supply curve for the marketing services, any increase in demand would lead to higher consumer and producer prices and the trade margin would remain relatively constant. Constant trade margins with the changing prices are inconsistent with the hypothesis of middleman exploiting the farmer by offering him low prices and maximizing the trade margin. On the other hand, with no scale economies and constant marginal cost of marketing services, constant absolute margins are consistent with the competitive market structure. If the trade margin is

independent of the price in the wholesale primary market, it would imply a strong rejection of the middleman monopsony hypothesis.

Table IX presents the regression equations relating the percentage trade margin to the wholesale primary market prices for toria, cotton, paddy, wheat and *gur*. The R^2 are very low except for *gur*. The regressions coefficients are not significantly different from zero for toria, cotton, paddy and wheat. For *gur* the coefficient is significantly different from zero but its sign is negative meaning that the trading margin is low when prices are high. This behaviour is hardly consistent with the behaviour of the middleman monopsonist. These results strongly support the hypothesis of competitiveness in the agricultural markets in Pakistan.

Table IX

Regression Equations of the Gross Marketing Margins on the Wholesale Primary Market Prices in Pakistan for different Agricultural Commodities

Crop	Regression Equation $M_t = a + b P_M$	R^2	Degrees of Freedom
Toria	$M_t = 3.97905 + .00524\ P_M$ (.08644)	.0001	23
Cotton	$M_t = 4.77662 - 0.03326\ P_M$ (0.06172)	.04	24
Paddy	$M_t = 12.35255 - .36645\ P_M$ (.42173)	.04	13
Wheat	$M_t = 6.10930 + .01365\ P_M$ (.07978)	.0004	53
Gur	$M_t = 18.90111 - .55374\ P_M$ (.09044)	.41	52

Notes: (1) $M_t = \left(\frac{P_M - P_b}{P_M}\right) 100$ where P_M and P_b are respectively whole and village market prices.

(2) Figures in parentheses are standard errors of regression coefficients.

The Seasonal Pattern of Marketing and the Peasants' Holding Capacity: Some Empirical Results

The proportion of the agricultural produce marketed in the immediate post-harvest period has been used as an index of the holding power[4] of the

[4]Holding power of a peasant is measured by his ability to hold back his marketed surplus till the seasonal price is at its peak during the marketing season.

cultivator. The underlying reasoning behind this hypothesis is twofold. First, the prices are generally lower in the months immediately after harvest. This assumption about low prices should be subjected to empirical analysis. An attempt is made to test this hypothesis in the next sub-section. Second, the peasants who are poor and are in debt, or face tax liability or other urgent obligations are forced to sell their marketed surplus immediately after harvest even though the prices are low. It is, therefore, argued that the higher the holding power of the cultivator, the lower the proportion marketed in the immediate post-harvest period when the market price is low.

Table X presents the results on the proportion of agricultural produce sold by farmers during each of the months after harvest for wheat, *gur*, toria, paddy and cotton in different districts of Pakistan. The table shows that the seasonal pattern of marketing varies from commodity to commodity and for some commodities from one district to another district.

For toria, paddy and cotton more than 90 percent of the marketed surplus is sold during the first four months after the harvest month. The harvest itself is of course not instantaneous (especially true for cotton), so the marketing would take some weeks even if each farmer brought his crop in as quickly as possible. For these four crops, the seasonality of marketing is quite high.

For *gur* and wheat the marketing pattern is different and slow. Wheat is the main food crop in Pakistan. *Gur* is also used on farms as a substitute for refined sugar. The marketed surplus is sold over most of the months during the year. About 90 to 95 percent of the marketed surplus is sold by the end of the sixth month after the harvesting month.

The hypothesis of the holding power and the proportion of the produce sold in the immediate post-harvest period draws only a limited support from the evidence presented in Table X. The pace of the marketing is more a function of the nature of the commodity and the nature of the marketing system for each of the commodity. Cotton ginning, paddy husking and oil crushing are seasonal industries in Pakistan. These commodities are mostly cash crops in Pakistan. Farmers sell these as soon as the crops come in. Most of the farmers who grow these crops are situated in rich regions and are relatively rich farmers in Pakistan. High seasonality of marketing on their part is not a reflection of poor holding capacity but may be a matter of choice on the part of farmers based on pure profitability considerations. If the farmer stores his cotton too long, he may not find any buyers after the marketing season is over.

The pace of marketing of wheat and *gur* is considerably slower than the similar pace for these commodities in the period before 1940. Such data are available for wheat for District Lyallpur for 1938. The reason for this change in the pattern is probably the improved holding position of the peasant over this period. In view of the regional disparities in the marketing pattern of each of the commodities, it is difficult to generalize about an overall decline in the seasonality of marketings in Pakistan. However, this trend is probably true for the major cereal crop.

Table X

Proportions of Agricultural Produce Sold by Farmers in Pakitan by Months during 1965-66 and 1966-67

Commodity and District	Months after Harvest						All other Months
	First Month	Second Month	Third Month	Fourth Month	Fifth Month	Sixth Month	
Wheat							
1. Lyallpur	6.80	28.89	24.86	13.90	15.26	4.07	5.22
2. Sheikhupura	18.43	20.11	27.40	13.45	10.30	3.66	6.65
3. Gujrat	20.13	33.45	20.79	17.20	4.21	.78	3.44
4. Multan	13.69	24.02	27.66	13.18	10.03	3.84	7.58
5. R. Y. Khan	4.54	29.01	34.80	15.56	6.79	3.69	5.63
6. Sukkur	16.82	37.39	17.60	11.06	5.61	4.36	7.16
7. Hyderabad	13.26	39.16	18.56	10.14	7.18	4.37	7.33
Gur							
1. Lyallpur	3.22	13.33	36.40	20.48	19.05	3.76	3.76
2. Sheikhupura	1.37	7.32	20.11	40.32	18.77	6.73	5.28
3. D.I. Khan	14.06	35.10	31.10	14.49	5.25	0.00	0.00
4. Peshawar	3.19	36.37	38.51	17.45	3.85	0.63	0.00
5. Multan	2.40	10.03	25.86	20.32	14.68	10.84	15.87
6. R.Y. Khan	1.49	7.79	26.31	22.38	17.48	11.29	13.26
7. Hyderabad	1.68	9.66	32.11	15.99	16.21	11.12	3.23

—*Continued*

Table X (*Contd.*)

Commodity and District	Months after Harvest						All other Months
	First Month	Second Month	Third Month	Fourth Month	Fifth Month	Sixth Month	
Toria							
1. Lyallpur	0.70	22.35	47.53	22.63	6.79	0.00	0.00
2. Gujrat	19.90	32.94	28.24	12 95	4.70	1.18	0.00
3. Multan	30.89	32.52	17.48	8.95	5.69	4.47	0.00
4. R.Y. Khan	11.90	29.66	41.12	17.32	0.00	0.00	0.00
5. Sukkur	30.07	37.92	22.01	10.00	0.00	0.00	0.00
Paddy							
1. Sheikhupura	10.69	53.04	25.20	11.07	0.00	0.00	0.00
2. Gujrat	22.18	50.52	24.68	2.62	0.00	0.00	0.00
3. Sukkur	13.23	51.73	25.65	9.39	0.00	0.00	0.00
4. Hyderabad	21.14	52.10	17.78	8.98	0.00	0.00	0.00
Cotton							
1. Lyallpur	13.58	34.91	31.16	17.13	3.22	0.00	0.00
2. Gujrat	16.30	47.29	28.89	7.52	0.00	0.00	0.00
3. Multan	3.82	22.08	43.25	18.84	7.54	4.47	0.00
4. R. Y. Khan	2.08	23.70	45.68	19.40	6.12	3.02	0.00
5. Hyderabad	10.81	20.09	46.28	11.45	6.61	4.76	0.00

Source: [1 and 3]

Underpricing in Village Markets in Pakistan: An Empirical Test

At the start of this section we noted the general belief in Pakistan that village markets did not reflect the competitive forces of supply and demand. The evidence presented in previous sections casts doubt on the belief. There is, however, one variant of non-competitive market force view which suggests that the prices in village markets are unduly depressed during the immediate post-harvest months. This is explained by the interplay of various factors. Farmers are busy in harvesting and have no time for marketing their products in wholesale markets. Farmers are in debt and their creditors purchase the produce in village markets. Rainy season coincides with the harvesting season and the condition of roads is bad in the few critical months. Farmers need cash and hence are forced to sell. Another variant of this hypothesis maintains that harvest prices are lower than the off-season prices by much more than the storage cost over this period. This latter version of the hypothesis is interesting and important. No reliable data on storage costs in the village or wholesale primary market are available. Consequently no test for this hypothesis was possible.

The hypothesis of underpricing in village markets during the immediate post-harvest months can be tested empirically. We regress village prices on wholesale market prices and on a dummy variable (H) which takes the value of 1 during the harvest months and zero in other months of the marketing season. If the hypothesis of underpricing is valid, the sign of the variable H should be negative and it should be significantly different from zero.

Table XI presents the relevant regression equations for wheat, paddy, cotton, toria and *gur*. The coefficient of H is not significant. The sign of H is consistent with the hypothesis in only one out of five cases. The hypothesis of underpricing in the village markets during the so-called "glut" months is rejected. It appears that there is enough competition in these village markets and the sellers get the price consistent with the market situation.

Level of Indebtedness and the Place of Sale

There is an abundance of literature in Pakistan suggesting that the cultivator who is in debt to the village moneylender-trader has to sell his produce to the creditor on the village site. We have tested this hypothesis by regressing the percentage of quantity sold in village markets on the level of indebtedness in each of the districts for five commodities. We expect the sign of the coefficient to be positive, i.e., the higher the debt, the higher the proportion sold in the village markets. Table XII presents the required regression equations. R^2 are low for all five commodities. The signs of the coefficient are consistent with the hypothesis in four out of five cases. The regression coefficients are significant for toria and wheat and not significant for the other three commodities. The evidence supports the hypothesis to some extent that the farmers do sell to their creditors in the village markets. However, it must be noted that this fact does not imply that these farmers get a lower price for the produce sold in these village markets. In fact, evidence was presented in the last sub-section that indicates that village markets are quite competitive. The fact that creditors do not charge any interest on the loans advanced to the farmers may mean that advancing loans may be a non-price method of attracting a larger volume of business in these markets. Especially when the profit margins are low, a larger volume of business is a key target for earning a large profit.

Table XI

Regression Equations of Village Market Prices on the Mandi *prices and a Dummy Variable Representing Harvest Season in Pakistan for Different Commodities*

Crop	Regression Equation $P_b = a + b P_M + C_H$	R^2	Degrees of Freedom
Wheat	$P_b = -.01631 + .98809\ P_M - .04057\ H$ (.01335) (0.7779)	.98	52
Paddy	$P_b = -1.41207 + 1.01914\ P_M + .12962\ H$ (.09175) (.21197)	.94	12
Cotton	$P_b = -.44176 + .97650\ P_M + .00096\ H$ (.02391) (.08621)	.98	23
Toria	$P_b = .10219 + .95521\ P_M + .03825\ H$ (.03781) (.19357)	.96	22
Gur	$P_b = 1.64834 + 1.00523\ P_M + .00700\ H$ (.01469) (.09946)	.98	51

Notes: (1) P_b and P_M are the prices in village and wholesale primary markets.
(2) H is a dummy variable which takes the value of 1 during Harvest Season and zero otherwise.
(3) Figures in parentheses are the standard errors of coefficient.

Table XII

Regression Equation of Proportion of the Marketed Quantity Sold in Village Markets on the Level of Indebtedness for Different Commodities in Pakistan

Commodity	$V_t = a + b D_t$	R^2	Degrees of Freedom
Toria	$V_t = 46.50871 + 1.35292\ D_t$ (.73353)	.13	22
Wheat	$V_t = 48.32210 + .91888\ D_t$ (.41654)	.07	59
Gur	$V_t = 61.82527 - .24189\ D_t$ (.51444)	.0064	37
Cotton	$V_t = 55.98537 + .73792\ D_t$ (.46780)	.09	24
Paddy	$V_t = 39.41206 + .70078\ D_t$ (.69990)	.09	13

Notes: (1) V_t = Proportion of the total quantity marketed in village market multiplied by 100.
(2) D_t = Level of indebtedness represented by the proportion of families in debt. Only non-institutional creditors are taken into account.

Transport Facilities and Place of Sale

There is a constant theme in the literature on marketing in Pakistan that good feeder roads between villages and towns enable the cultivator to sell his produce in the wholesale markets. We test this hypothesis by regressing the percentage of the produce sold in the village market on a proxy variable representing the nature of transport facilities. The proxy variable is the percentage of the families owning a pair of bullocks and a cart. We expect that the proxy variable should be negatively related to the percentage of produce sold in the village market. Table XIII presents the relevant regression equations for five commodities. The sign of the regression coefficient is contrary to the hypothesis in all five cases. The regression coefficient is highly significant in all five cases. R^2 ranges from 0.14 to 0.46. An explanation for this unexpected result is presented in the next sub-section.

Table XIII

Regression Equations of the Proportion of the Marketed Quantity Sold in Village Markets on the Level of Cattle Owning Families in Different Districts in Pakistan

Crop	Regression Equation $V_t = a + bT$	R^2	Degrees of Freedom
Gur	$V_t = -32.52902 + 1.36031\ T$ (.53802)	.14	37
Wheat	$V_t = -52.20338 + 1.88235\ T$ (.25999)	.46	59
Toria	$V_t = 22.19754 + .94121\ T$ (.43626)	.16	22
Cotton	$V_t = -44.82817 + 1.84305\ T$ (.47700)	.36	24
Paddy	$V_t = 10.82376 + .79807\ T$ (.38130)	.25	13

Notes: (1) V_t = Proportion of the marketed surplus sold in the village markets.
(2) T = Proportion of cattle-owning families in the total number of agricultural families.

Size of the Marketed Surplus and Place of Sale

The unexpected results in the previous section prodded us to find out a plausible explanation. We have shown elsewhere that the marketed surplus is a positive function of the output of crops [10]. We hypothesize that the

marketing system is developed more efficiently in markets that have a volume of business greater than a critical size. We further hypothesize that the sophistication of the marketing system is a positive function of the size of the market. According to this reasoning, village markets attract buyers from outside with increasing regularity if the marketed surplus is large and is increasing every year. When the regular and reliable outlet to farmers is available in the village market, they sell their produce in these markets and transfer their effort and resources previously utilized to take the produce to town markets to the production of farm goods. If this reasoning is valid, then the percentage sold in village markets would be positively related to an index of the marketed surplus available in the villages.

Table XIV tests this hypothesis by regressing the percentage sold in village markets in different districts for five commodities in the district per capita agricultural income. Agricultural per capita income is a proxy variable for the size of the market. We expect the sign of the coefficient to be positive.

The results in Table XIV show that the sign of the coefficient is consistent with the hypothesis in all five cases. The regression coefficients are significant in all five cases. One can reinterpret results obtained in Table XIII. The variable T in that table is positively correlated with the variable Y in Table XIV. It probably represented the size of the market. It is a case of size of business attracting new traders to set up their business in village markets.

Table XIV

Regression Equation of the Proportion of the Marketed Quantity Sold in Village Markets on the Level of District Per Capita Income in Pakistan

Crop	Regression Equation $V_t = a + bY$	R^2	Degrees of Freedom
Gur	$V_t = 1.61548 + .04724\ Y$ (.02373)	.09	37
Wheat	$V_t = -33.46484 + .09293\ Y$ (.01558)	.36	59
Toria	$V_t = -62.80502 + .12740\ Y$ (.03805)	.32	22
Cotton	$V_t = -26.899801 + .08519\ Y$ (.02473)	.32	24
Paddy	$V_t = 19.78345 + .03887\ Y$ (.02071)	.20	13

Note: Y = District per capita income.

Conclusions and Policy Suggestions

The main aim of the present study was to trace the changes in the marketing system since the partition of the subcontinent in 1947 and examine the price formation processes in the village markets where most of the farmers sell a major portion of their marketed surplus. There is a general agreement among the economic historians that the village markets in the British India were characteristically oligopsonistic and that the farmers were offered unfavourable prices for their produce. The prevailing view of trade as an exploitative and antisocial activity is probably due to the historical experience. In Pakistan, this view of the trading profession is considered as an established fact and public policies to curb the antisocial activities by the traders are often suggested. It was, therefore, important to appraise the performance of the private markets in the field of agricultural trade in the rural areas.

The oligopsony in British India was a result of an inadequate and expensive transportation system and the presence of a class of middlemen who performed the triple functions of merchandizing, produce buying and credit supply. The almost total exodus of this class in 1947 and the reluctance on the part of the new trading class to combine these three functions started the process towards the disintegration of the oligopsonistic market structure. The government policies in the field of credit supply and transportation completed the process. The response of traders to sieze the trading opportunities suggests an important result. The performance of the agricultural marketing system is a function primarily of inputs supplied by other sectors. These inputs comprise transportation, communications and credit facilities. Most of the marketing changes that occurred in Pakistan since 1947 were straightforward adjustments to the shocks introduced in the system and the improvements in the inputs which accompanied the process of development in the economy.

The structure of the village markets during 1955-67 was analysed and various hypotheses regarding the competitiveness of agricultural markets in Pakistan were tested. The prices in the village and primary markets were highly correlated. The intermarket price differences were generally less than the transfer costs between the markets. The marketing margins in the wholesale primary markets were unrelated to the prices in the markets indicating that the price increases were passed to the farmers. This evidence strongly supports the hypothesis of competitiveness in the agricultural markets.

The poor and indebted cultivators sold their produce in the village markets in the immediate months after harvest. No evidence was found, however, to indicate that the prices in the village markets were unduly low in the immediate post-harvest months. Transport bottlenecks and/or the glut during these months did not unduly depress the prices in village markets relative to the primary markets due mainly to active competition among the traders.

The seasonality in the marketing of staple food crops has declined as compared with an earlier period. There is still high seasonality for cash crops, however. This type of marketing behaviour is perversely related to the holding capacity of the farmers since producers of cash crops are normally rich farmers. This behaviour, however, follows from the choice of farmers based on pure and simple profitability considerations.

The findings of this study are not strictly comparable with the study by Uma Lele for foodgrains marketing in India. The Indian study relates to the wholesale primary and terminal markets while the present study deals with village and wholesale primary markets. It is, nevertheless, interesting to point out that the markets in Pakistan show a higher degree of market integration than those in India. The difference in the market structures in the two countries was explained by the dominance of moneylenders in India and the government policies that interfered most with the private markets in India as compared with Pakistan. Before any firm conclusions on the structure of markets in the two countries are accepted, there is a need for the study of wholesale primary and terminal markets in Pakistan.

Policy Implications

The findings of this study have certain implications for government policies. The private marketing system is doing an efficient job of assembling the agricultural produce at the stage where farmers participate in the markets. The price signalling role is also being done quite efficiently by the present marketing system. The government should not replace this efficiently working system by a centrally directed system as there is a great danger of misallocation of government resources for a task that the private trade does at the lowest possible cost.

It must be pointed out, however, that the government has and should supply transport, credit and other facilities to the private marketing sector. These inputs help improve the performance of the private markets.

The recommendation of continued reliance on private markets in Pakistan is based solely on the efficiency criterion in the resource allocation. If equity or some other policy goal requires an intervention with the private markets, the nature of trade-offs and their relative costs and benefits must carefully be weighed before any policy is adopted.

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