This study examines the stereotype about the marketing system in the Punjab that the existing foodgrain market structure is imperfect. The imperfections are generally attributed to the monopolistic and monopsonistic activities of the private traders, and on this basis, a case for State intervention in the foodgrain market is made. But the government policy can itself form a source of market imperfections. In fact, the examination of market structure, conduct and performance has remained almost neglected from this angle.

The institutional structure of a marketing system may, at a point of time, be less than an optimum for efficient marketing functions. Even if the structure were optimum at a given point of time, it could get out of alignment owing to the changes in technology, trading patterns and practices and the government policy measures. The present study was conducted with a view to examining these dimensions of the foodgrain market structure of the Punjab.

The specific objectives of the study were to examine:
1. the nature of competition in the foodgrain markets,
2. the impact of increased production of foodgrains on marketed surplus,
3. the impact of government zonal policy in foodgrains on price structure and the operational business of private trade,
4. the impact of government procurement operations in foodgrains on private trade and spatial and temporal pattern of marketed surplus, and
5. the impact of partial and complete takeover of wholesale trade in foodgrains by the government on pattern of marketed surplus, prices, procurement and operational business of private trade.

Design of Study

Both the primary and secondary data were used to meet the objectives of this study. Multistage stratified random sampling technique was used to select the ultimate units of study. The markets and the villages formed the primary and the traders and farmers the ultimate units of the enquiry. In all, 157 marketing firms and 145 farmers scattered over 12 foodgrain markets and 21 villages respectively were selected randomly for study. Further, to examine the impact of the recent experience of takeover of wholesale trade on the market structure, out of the six wheat markets included in the master sample, one each representing big (Moga), medium (Tarn Taran) and small (Zira) markets were taken up for intensive study during May-July, 1973.

Because of the frequent changes in the government policy measures and the consequent data limitations, mostly the tabular analysis was used but, wherever, adequate data were available, statistical tools of analysis were applied. The relevant market behaviour of the producer farmer and the grain trading firm was studied by fitting Cobb-Douglas type of function. The nature of competition prevalent in the markets was examined with the help of Lorenz curves and Gini ratios. Before the Gini ratios were worked out, the log normality of data was tested by fitting probit functions.

The statistical analysis of the data related to production, prices, procurement, arrivals, stocks of foodgrains with the
private trade, etc., This was preceded by first hand observation of market structure and collection of information through informal interviews of producer-farmers, private traders and market officials. In case of such complicated problems, where personal biases cannot be completely eliminated, statistical data by itself were not adequate to arrive at specific conclusions, unless coupled with the method of direct observation. The farmers and the traders were, therefore, interviewed extensively through informal discussions and with the help of a schedule.

RESULTS AND DISCUSSION

Nature of Competition in Foodgrain Markets

(1) Ease of Entry to Kacha Arhtiyas Business

To examine the ease of entry into kacha arhtiyas business, the data were collected from 28 marketing firms which had entered this business during the period 1960-70. The study showed that 21 percent of these firms were started by paca arhtiyas, and 25 percent were set up by partners of firms which were already in this trade. Another 14.29 percent each were set up by employees of the private trade and by village merchants of foodgrains. In 17.85 percent of these cases, the entrants were the producer-farmers. Thus the analysis showed that there was hardly any restraint to the entry of the firms into kacha arhtiyas foodgrain business. This is also supported by the presence of large number of these firms in the markets of the Punjab. The study showed that in Khanna market (a large wheat market of the Punjab) the number of kacha arhtiyas increased from 85 in 1967-68 to 101 in 1970-71, showing thereby an increase of 18.8 percent.
One of the important dimensions of the market structure is the relative concentration of buyers and sellers in the market. In 1966-67, the five top paca arhtiyas firms which comprised 13.51, 17.86, and 21.74 percent of the total paca arhtiyas, purchased 37.89, 41.90 and 63.61 percent of wheat, gram and maize respectively. Again, during 1970-71, 13.51 percent top firms purchased 41.39 percent of total wheat, whereas in case of gram, 23.81 percent of such firms purchased 61.40 percent of total gram business and five big firms (20 percent) purchased 59.45 percent of total maize on their own account.

The Gini ratios increased from 0.1436, 0.3738 and 0.4412 in 1966-67 to 0.9690, 0.7808 and 0.5404 in 1970-71 in respect of wheat, gram and maize respectively.

In regard to the volume of business handled on commission basis by the kacha arhtiyas, the study showed that in 1966-67, the five big firms, comprising 8.09, 8.33, 8.47 and 16.47 percent of the sample kacha arhtiyas firms, handled 21.63, 27.81, 33.64 and 32.84 percent of total business of wheat, gram, maize and paddy respectively. The corresponding values of Gini ratios were 0.7358, 0.6614, 0.5034 and 0.6622 respectively. Further during 1970-71, the five big firms forming 7.69, 9.09, 7.84 and 12.82 percent of total kacha arhtiyas, commanded 21.25, 43.58, 35.73 and 30.18 percent of total commission business of wheat, gram, maize and paddy respectively. The corresponding Gini ratios were 0.1882, 0.8052, 0.5294 and 0.4218 respectively.

Thus the study indicated that on the buyer's side, the typical pattern in foodgrain markets was that of a few large
buyers purchasing major share of total business with a relatively large number of small firms handling the remaining business. Although, the results of the study supported the hypothesis of foodgrain purchase business concentrated in a few hands, yet it does not mean that there was collusion amongst the small number of big firms. This was because these firms had competitive attitude towards their business. They competed in exporting foodgrains from one area to another, in the markets which were well integrated. The results pertaining to market integration are discussed in section C.

It was noted that on the seller's side the producer-farmers came from widely scattered geographical areas around the markets. They were large in number and were completely unorganised, which means lack of concentration on the seller's side. Thus, the study of the nature of competition in the foodgrain markets of Punjab showed that the market structure by and large, was competitive in operation.

(iii) Market Share Function

The market share function of the firms handling produce of the farmers on commission basis in the markets was studied in relation to the credit advanced by the firms and the number of years of their stay in this business. The study showed that in case of kacha arhtiyas, the regression coefficients of the credit advanced to farmers held positive signs and were significant at one percent level for all the five years. The regression coefficients of the age of the firms were positive but not significant. This showed that the kacha arhtiyas tended to get more business as they gained in experience in terms of their stay in this business. The values of the coefficient of multiple
determination varied between 0.28478 to 0.38240 and were significant at one percent level.

The study of the market share function of the kacha arhtiyas showed that the inclusion of credit and the stay of the firm in business explained only small variation in the market share. Again, it was found that these firms competed more on service basis. The study showed that out of 120 kacha arhtiyas and kacha-paca arhtiyas, 34.17 percent arranged transport for the farmers for bringing their produce to the market, 43.33 percent firms provided empty gunny bags, 70.00 percent made arrangement for boarding and lodging of farmers. Three firms (2.50 percent) arranged the facilities of combined harvester and thresher for the farmers.

Furthermore, the study showed that those who were already in business, improved their relative market shares by extending credit facilities to the farmers. On an average, a kacha arhtiya granted credit of Rs. 26048 to 85 farmers in 1966-67, which increased to Rs. 71716 (116 farmers) in 1970-71.

Thus, the study showed that the kacha arhtiyas performed a useful function in the foodgrain markets. The policy implication of this would be that any move of the government to popularise the cooperative marketing societies and for that matter any other institution will have only limited chances of success unless they catered to the diversified needs of the farmers. The farmer will not extend patronage to government agency, which did not assure him quality service.
B. **Increased Production of Foodgrains and Its Impact on Market Structure**

(1) **Production and Marketed Surplus**

 Production of wheat, maize and paddy increased by 102.13, 15.61 and 55.65 percent respectively in 1970-71 over that of 1967-68. During the same period the marketed surplus increased by 151.26, 20.88 and 56.82 percent in case of wheat, maize and paddy respectively.

(11) **Changes in the Time Pattern of Marketed Surplus**

 It was found that the sample farmers disposed of 68.24, 69.55, 66.41 and 93.36 percent of the total marketed surplus of wheat, gram, maize and paddy during the post-harvest period in 1967-68. The corresponding figures for wheat, gram and maize increased to 83.36, 75.66 and 69.36 percent in 1970-71, showing thereby an increase of 15.12, 6.11, and 2.95 percent respectively. Thus a major shift in the marketed surplus of wheat in favour of post-harvest period was observed in 1970-71 over 1967-68 on the sample holdings.

 Again, the time pattern of marketed surplus was examined by farm size. The study showed that the small, medium and large farmers disposed of 87.92 to 93.64, 71.40 to 85.73 and 58.03 to 76.91 percent respectively of their total marketed surplus in the post-harvest period of 1967-68 to 1970-71. The corresponding figures for gram varied from 81.78 to 93.10, 66.78 to 82.31 and 64.00 to 67.05 respectively. Similarly, the small, medium and large farmers sold 85.53 to 93.25, 71.48 to 75.36 and 43.55 to 58.11 percent of total marketed surplus of maize and 94.74 to 97.15, 91.70 to 95.25 and 88.21 to 95.33 percent of marketed surplus of paddy in the post-harvest period of 1967-68 to 1970-71. This means the
small farmers sold relatively larger proportion of their marketed surplus during the post-harvest period than others.

(iii) **Factor Affecting Post-Harvest Sales of Foodgrains**

Post-harvest sale function of each of the four selected foodgrains was fitted separately for different years. In case of wheat on the overall farm size situation, the regression coefficients of production were positive and varied from 1.0458 to 1.2394. These coefficients were significant at one percent level. The regression coefficient of size of operational holding (-0.1785) was significant only at 10 percent level for 1967-68, but its value of -0.3266 was significant at one percent level for 1970-71. The regression coefficients of credit borrowed held positive signs except for 1967-68. These coefficients were significant at one percent level for 1970-71 and at five percent level for 1969-70. The $R^2$ values varied from 0.3094 to 0.9124 and were significant at one percent level.

Again, regression coefficients of production was positive and significant (at one percent level) on small, medium and large farm size situations. The regression coefficient of size of operational holding was not significant in case of small farmers. It was significant at ten percent level for two out of four years in case of large farmers. The regression coefficient of credit borrowed on small farms was positive in three out of four years but it was significant at ten percent level in two out of four years. On medium farm size situation, these regression coefficients were positive and significant at one percent level in two out of four years. However, no statistically significant relationship was found between post-harvest sales of wheat and credit borrowed.
during the preceding year on the large farm size group.

In case of gram, the coefficient of production held positive sign and was significant at one percent level, (except for large farmers in 1969-70, where it was significant at ten percent level). The coefficient of size of operational holding was non-significant in case of small farmers, but it was significant \((-0.6099\) at ten percent level in only one out of four years in case of medium farmers and again non significant on the large farm size situation for all the years.

In case of maize, coefficient of production was significant at one percent level on all farm size groups for all the years. The regression coefficient of size of operational holding was significant only in case of overall farm size situation at five percent level in 1968-69 and 1969-70 and at one percent level in 1967-68 and 1970-71. The regression coefficient of credit borrowed was non significant on all the farm size situations.

In case of paddy, regression coefficient of production was positive and significant at one percent level on all farm size groups for all the years. The coefficient of the size of operational holding was non significant except in case of small farmers for 1967-68, when it was significant at one percent level. Similarly, the regression coefficients of credit borrowed was non significant except for the small farmer for 1967-68.

Thus the study showed that the post-harvest sales of wheat, maize, and paddy on the different farm size situations were largely due to the increase in the levels of production of foodgrains. The small and the medium group of farmers, however, sold more of wheat during the post-harvest period because they were under financial pressure.
(iv) Post-Harvest Market Supply Function

In order to understand the phenomenon of increased post-harvest market arrivals, the time series data (1958-59 through 1970-71) were also analysed. The influence of the following independent variables on the post-harvest sales of selected foodgrains was studied: production, total annual market arrivals, post-harvest price, price differentials in the lean period over the post-harvest period in the preceding year and the expected price in the current year. The study showed that changes in the post-harvest arrivals of wheat were primarily due to changes in its level of production. In case of gram, post-harvest arrivals varied also with variation in its annual arrivals. The regression coefficient of annual arrivals was positive and significant at one percent level. Maize post-harvest arrivals showed significant relationship with level of production, regression coefficient being positive and significant at one percent level and price differentials during the preceding year the regression coefficient was negative and significant at five percent level. Thus the study showed that much of the variation in the post-harvest arrivals of foodgrains were due to the changes in the level of production. The policy implications of this would be that the market structure in the developing countries must be viewed in a dynamic context. The marketing facilities must expand to accommodate increased level of marketed surplus in the wake of increased production of foodgrains.

(v) Increased Production and Marketing Facilities

The study showed (section D) that the increased volume of post-harvest market arrivals created serious bottlenecks in
respect of handling, storage, transportation and above all market yard facilities. As a result, the markets experienced serious gluts during the post-harvest seasons of 1963-69 through 1970-71. This necessitated the increase in the number of market yards procurement centres to avoid congestion in the big markets. Consequently, the number of procurement centres in the Punjab increased from 121 in 1967-68 to 223 in 1970-71, showing thereby an increase of 84.3 percent. But in most cases, these newly opened market yards lacked market technology and basic market infrastructure. As such, these centres failed to effectively compete with the large markets.

(vi) Production and Retentions of Foodgrains by Farm Size

The small, medium and large category of farmers retained wheat for family consumption and other contractual payments, which varied from 25.11 to 27.26, 19.51 to 21.71 and 15.89 to 16.74 percent of production respectively during the period 1972-73 to 1974-75. Also, it was found that the small and medium category of farmers repurchased wheat, for family consumption, which varied from 1.59 to 3.47 and 0.61 to 2.95 quintals respectively during the same period. The large farmers did not repurchase wheat for family consumption except for 1967-68 when they made a nominal repurchase of 0.05 quintal. Thus, the study indicated that the problem of distress sales, also known as 'buy bad,' was more serious with the small farmers.

C Zonal Policy and Its Impact on Market Structure

The impact of the food zones on the market structure was examined with respect to the following:

(i) Regional Price Variations

The study showed that the price differentials in respect
of wheat between Khanna and Hapur, Khanna and Khagarla and Khanna and Bombay increased from Rs. 0.74, 3.36 and 14.81 per quintal during free trade period to Rs. 32.44, 51.22 and 15.68 per quintal in the period when the Punjab constituted a single state zone. In case of gram it was found that the price differential between Barnala and Patna, Barnala and Hapur, and Barnala and Delhi sharply increased from Rs. 6.06, 3.34 and 2.77 per quintal during free trade period to Rs. 43.52, 35.21 and 12.85 per quintal respectively during the single state zone period. In case of maize, the price differentials increased from Rs. 0.56, 0.37 and 0.80 per quintal during free trade period to Rs. 4.92, 23.96 and 12.09 per quintal respectively between Jagroon and Baraich, Jagroon and Dohad and Jagroon and Khagarla markets.

Again, the study showed that the regional price differentials during the free trade period were the lowest, and in general were lower than the costs of shipment. In case of single state zone, the price disparities between the Punjab markets and those of other state markets widened sharply, and in most cases exceeded the cost of transportation. This happened because the formation of food zones cut off the normal trade channels, the trade relations of the private trade and eliminated price competition between the surplus and deficit states of the country and thus created imperfections, in the market structure.

The study showed that the coefficients of correlation between Khanna and Delhi, Khanna and Bombay, Khanna and Hapur, and Khanna and Khagarlia decreased from 0.9348, 0.7022, 0.9443 and 0.7586 during free trade period to 0.8621, 0.2823, 0.7309 and 0.6540 during multi-state zone and further declined to
-0.2858, -0.2958, 0.1265 and -0.1025 respectively during single state zone period. Similarly, in case of gram, the coefficients of correlation between Barnala and Patna, Barnala and Hapur, Barnala and Delhi declined from 0.8246, 0.9385 and 0.9297 during free trade period to 0.3314, 0.8887 and 0.8512 during multi-state zone period and further decreased to 0.7141, 0.5766 and 0.5643 respectively during the single state zone period. In case of maize, the correlation coefficients between Jagraon and Baraich, Jagraon and Dohad, and Jagraon and Khagaria sharply declined from 0.8028, 0.3926 and 0.8946 during free trade period to 0.2990, 0.3585 and 0.3217 during single state zone period respectively.

Thus by and large the prices in the various markets of the Punjab moved in Unison and were highly correlated. Higher positive coefficients of correlation were found between the monthly prices of foodgrains in the different markets during the free trade period. Consequent upon the restrictions on the free movement of foodgrains, the association of prices between the markets of the Punjab with those of the outside zone markets got disturbed and the markets no longer remained integrated. Thus the zonal policy created imperfections in the foodgrain market structure.

The comparison of lower prices of foodgrains in the Punjab with higher prices in the other states brought out the price depressing effect of zones in the surplus states like that of the Punjab. Viewed from this angle, the foodgrain zones did not serve the best interests of the farmers in surplus states like that of the Punjab.

(ii) Seasonal Price Variations

In case of wheat, off seasonal rise in prices worked out
to be 13.22 percent (overall period). This figure may not be regarded as exceptionally high as included the costs of storage. Furthermore, it was found that the seasonal high as a percent of seasonal low in respect of wheat decreased from 14.29 during free trade period to 6.92 during single state zone situation. This evidence also suggests that the zonal policy of the government created imperfections in the foodgrain market structure of the Punjab.

(iii) **Profitability of Storage of Foodgrains**

The study showed that the private trade suffered losses from wheat storage to the extent of Rs. 7.10 per quintal in 1967-68 and Rs. 7.79 per quintal in 1970-71, whereas it earned profit of Rs. 8.67 per quintal in 1966-69 and Rs. 1.22 per quintal in 1969-70. In case of gram it incurred losses which were to the tune of Rs. 7.42 per quintal in 1967-68 and Rs. 3.88 per quintal in 1968-69. As against this, the profits earned from gram storage worked out to Rs. 46.84 per quintal in 1969-70 and Rs. 3.18 per quintal in 1970-71. The case of maize, the private traders incurred losses in one out of four years, and the extent of losses on per quintal basis was Rs. 1.68 in 1970-71, whereas the profits varied from Rs. 3.86 in 1967-68 to Rs. 13.33 in 1968-69 during the remaining three years. Thus the study revealed that it would not always pay to store foodgrains. In fact heavy losses in some years were matched by excessive profits in others. But despite the year to year variability in the profits and losses in respect of wheat, gram and maize, a trader on the average earned an overall total profits of Rs. 12518.51 during four years under study.
(iv) **Zonal restrictions and the stocks of foodgrains with Private Trade.**

The study showed that during 1960-61, when the Punjab was a part of the Northern wheat zone, the private trade held stocks of wheat to the extent of 648307 tonnes. Next year in 1961-62, when the zonal restrictions were removed, the stocks of wheat with the private trade increased to 1604620 tonnes. Such a change in the market structure occurred because the sudden and frequent changes in the zonal policy of the government created state of uncertainty in the minds of private trade and also affected their future expectations about profits, which exercised considerable influence on the market structure.

(v) **Zonal Policy and Exports of Foodgrains From the Punjab**

The study showed that the exports of wheat, gram and rice decreased from 19.63, 48.24 and 41.05 percent of production during free trade period to 11.42, 28.19 and 19.40 percent of production respectively during the single state zone period. Thus the food zones put a check on the exports of food surpluses from the Punjab to the deficit pockets of the country and, as such, competition no longer remained brisk in the markets of the Punjab.

(vi) **Zonal Restrictions and the procurement performance**

The government imposed restrictions on the free movement of foodgrain with a view to procuring more of foodgrains from the markets. The study showed that the government procured 297 thousand tonnes (10.63 percent) out of 2785 thousand tonnes of production during 1965-66, when the Punjab formed a part of the multi-state zone. The multi-state zone was extended to include U.P. State where the wheat prices ruled higher. This encouraged the exports of wheat to U.P. on private account. As a result, the government could only
procure 144 thousand tonnes (5.88 percent) out of the total production of 2451 thousand tonnes, as against the target of 232 thousand tonnes. During 1967-68, the Punjab was declared a single state zone and consequently the government was in a position to procure 570 thousand tonnes (17.09 percent) out of the production of 3335 thousand tonnes. This quantity of wheat procured was higher than the target of 475 thousand tonnes fixed for that year. No doubt, this increased quantum of wheat procured from the Punjab was also due to the increased production, yet the influence of the zonal system was also dominant.

Thus, the study showed that, on the whole, the zonal restrictions on the free movement of foodgrains served as a potent instrument of creating imperfections in the foodgrain markets of the Punjab.

D. Procurement Policy and Its Impact on Market Structure

(i) Procurement and Production

The study brought out that the quantity of wheat procured as a percentage of production varied from 0.18 (1963-64 to 37.09 in 1969-70). The coefficient of correlation between quantity procured and the levels of production was 0.6896. The correlation coefficient for rice came to 0.7982. These were significant at one percent level. The quantities of rice procured by the government varied from 23.68 in 1951-52 to 69.16 percent of the total production in 1969-70. No doubt procurement was also influenced by the system of procurement and the structure of the market yet the changes in production had greater impact on procurement.

(ii) Link Between Procurement and Storage Capacity owned by the Government

During the period 1950-51 to 1969-70, the procurement
of wheat and paddy by the government increased by 460 percent, whereas the storage capacity of government owned godowns increased by 268.96 percent. The existing storage capacity with the government got out of alignment with the quantity of foodgrains procured from the Punjab. Consequently, the government had to accommodate the procured foodgrains in rented godowns of the private trade which were not of required specifications.

(iii) **Nature of Integration Amongst the Marketing Firms**

The study showed that 47.00, 52.73 and 62.16 percent of the sample firms, belonging to the category of kacha arhtiyas, kacha-paca arhtiyas and paca arhtiyas respectively secured vertical integration. The kacha arhtiyas did it to patronise the producers sellers, whereas the paca arhtiyas's objective was to thwart the impact of present and future policy of government. It was done by starting new product lines, such as, paddy shellers, flour mills, groundnut expellers, cotton ginners etc.

(iv) **Procurement Policy and Its Impact on Spatial Allocation of Foodgrains**

The share of small markets in case of wheat and paddy increased from 0.80 and 3.17 percent in 1967-68 to 40.59 and 30.36 percent respectively in 1970-71. However, the share of large markets decreased from 93.61 and 62.93 percent in 1967-68 to 58.59 and 34.60 percent respectively in 1970-71. The village sales of foodgrains showed a declining trend during the period under study. Thus, the procurement policy brought about a shift in the spatial allocation of the marketed surplus of foodgrains by the farmers. The sales of wheat, gram, maize and paddy in the village declined. The relative share of the small markets increased substantially.
Whereas those of the large markets declined during the period 1967-68 to 1970-71. Also, the main reason for the selection of small markets/sub yards by the farmers was the proximity of the market for early disposal of foodgrains.

The procurement policy followed in respect of paddy resulted into following imperfections in the market structure:

(a) the unrecorded sales of paddy by the farmers to the millers increased and varied from 29.27 percent to 39.28 percent of total marketed surplus during 1967-68 to 1970-71. This affected the nature of competition in the markets, because the whole quantity of paddy was not exposed to competitive bidding by the buyers.

In fact, prices were sometimes settled through negotiations between the farmer and miller and delayed payments of sale proceeds were made to the farmers, which varied from two to three months.

(b) Some purchases of paddy by millers were made on higher prices, because by purchasing directly from the farmer he could evade government share in rice.

Partial State Trading and Its Impact on Market Structure

Partial State Trading in wheat was implemented in the Punjab during 1959-60 and 1960-61. Such a move of the government vitally affected the following aspects of the market structure.

(1) Impact on Market Arrivals

The study showed that the market arrivals of wheat during 1959-60 and 1960-61 formed only 20.33 and 18.96 percent of production respectively. With a break of one year, when the policy was given up, the market arrivals as a percent of production increased to 27.52 and 26.61 during 1962-63 and 1963-64 respectively. However, there was not much change in the level of production of
wheat in the Punjab during these years. Also, the post-harvest arrivals as a percent of total arrivals diminished during the period of State Trading.

(ii) **Impact on the Stocks held by the Private Trade**

The study showed that the private trade held relatively smaller quantity (54024 tonnes) of wheat in storage for speculative purposes during 1960–61, when the policy of State Trading was in operation. As against this, when the scheme was given up, the private trade increased its stock of wheat, which touched a new mark of 80895 tonnes in 1961–62, although there was not much difference in the production of wheat in the Punjab.

(iii) **Impact on Procurement**

The study showed that the procurement of wheat was substantially higher during the year of State Trading. During this period, that is, 1959–60 and 1960–61, procurement as a percentage of production formed 7.90 and 6.62 respectively as compared to 1.50 during 1958–59, when the scheme was not in operation.

(iv) **Impact on Price Behaviour**

The study showed that the market prices of wheat were not allowed to fall below Rs. 39.17 per quintal (June 1959–60) and Rs. 37.19 per quintal (June 1960–61) even when the arrivals were at the maximum and it did not rise above Rs. 44.96 per quintal (December 1959–60) and Rs. 42.60 per quintal (November, 1960–61) when the arrivals were relatively low. The comparison of the price data for the period 1958–59 to 1961–62 clearly brought out that the policy succeeded in stabilising prices of wheat in the Punjab.

Thus, the study showed that the scheme of partial State
Trading in wheat could be made a success by making the best use of existing marketing machinery. In fact, the private trade was not eliminated from the market, its operations were rationalised and better improved.

Also the study showed that the coefficient of variations in the monthly prices of wheat declined from 1201 percent in 1958-59 (free trade period) to 3.84 and 3.99 percent respectively in 1959-60 and 1960-61. Once again, the coefficient of variation in monthly prices of wheat increased to 7.81 percent in 1961-62, when the scheme was withdrawn.

F Take-over of Wholesale Trade in Wheat and Its Impact on Market Structure (1973-74)

Consequent upon decline in production of foodgrains from 108.4 million tonnes in 1970-71 to 100 million tonnes in 1972-73 and the decreased in the stocks of the government, the decision in favour of take-over of wholesale trade in wheat was taken. The take-over of wheat was implemented from rabi 1973-74.

The take-over of wholesale trade in wheat was a big experiment conducted in the markets of Punjab. As such, it affected pattern of market arrivals, performance of procurement and system of prices. Besides, it affected the operational business of wholesaler and retailer.

I Impact on Marketed Surplus

Production of wheat on the sample holdings decreased by
11.62 percent during 1973-74 as compared with 1972-73. The corresponding loss in marketed surplus was to the tune of 15.06 percent. Also, the farmers held relatively larger proportion (21.52 percent) of marketed surplus during 1973-74 for disposal during the lean period, compared with 17.87 percent in 1972-73.

Again, the big farmers kept 25.45 percent of total surplus of wheat for disposal during 1973-74 as compared with the low percentage of 20.28 in 1972-73.

II. Impact on Prices - Dual Prices

The policy of takeover resulted into system of dual prices. The retailers on an average paid Rs. 2.37 per quintal more to the farmers, as compared with the procurement prices. The farmers in the process also saved marketing charges. The retailer could, thus, get better quality wheat, which after processing fetched higher margin of profit. Such a move on the part of retailer encouraged direct sales by the farmers to him.

III. Direct Sales of Wheat to Retailer by Farmers

The study showed that 6 farmers out of 45 sample farmers (13.13 percent) sold some portion of their surplus directly to the retailers. Out of their total marketed surplus of 344 quintals, the quantity sold directly to the retailers was found to be 141 quintals (40.99 percent). When compared with the total marketed surplus of all the 45 sample farmers, 141 quintals (6.07 percent) out of 2329 quintals of total marketed surplus were sold directly to the retailers by the sample farmers.

IV. Impact on Procurement

The study showed that the procurement of wheat decreased from 3179 thousand tonnes in 1972-73 to 2707 thousand tonnes in
1973-74, when the wholesale trade in wheat was taken over. The procurement as a percentage of production decreased from 56.59 in 1972-73 to 50.49 in 1973-74. The poor performance of procurement was due to the low production of wheat and much lower marketed surplus on the one hand and the inhibitory regulations of the government on the other. The retailers could purchase only ten quintals of wheat in a day. This prompted them to enter into the secret deals with the farmers which in turn adversely affected the procurement through its impact on market arrivals.

V. Impact on Private Trade

It was observed that one wholesalers firm (7.14 percent) left the foodgrains business, whereas four of them (28.56 percent) changed over to kacha arhtiyas business. Of these four, the two did it in cooperation with the farmers, and took up the commission business in the foodgrain markets.

VI. Opinion Survey of Farmers Towards Takeover

The study showed that out of 145 farmers included in the sample, 73 (50.3 percent) showed their dislike for takeover of wholesale trade. Of them 35, 24 and 14 respectively belonged to the category of small, medium and large group of farmers. Further, it was found that the preference for takeover of trade in wheat was more pronounced amongst the large farmers. This was perhaps due to the relatively lesser dependence of large farmers on commission agents for credit. The study also showed that 30.1 percent of farmers rejected the policy on the ground that this would stand in their way to obtain credit from commission agents, 16.52 percent showed their dislike on the ground that the government official would take no personal interest in getting them
a fair deal, 13.72 percent reported their opposition due to the
fear of manipulation of prices at low level, 24.66 percent
condemned it on the ground of corruption and red tapism.

Thus the study showed that the government policy of
takeover brought about changes in the market behaviour of
the producer farmers and marketing firms. It also resulted into
changes in the time pattern of marketed surplus. As such, the
government intervention in the foodgrain market served as a potent
instrument for creating imperfections in the market structure.
Finally the study showed that the government marketing operations
of the type of zonal restrictions, procurement and State Trading
in foodgrains were geared to handling marketing problems on a
short term basis, so much so that the long term perspective was
altogether lost. It was only after the economic situation (price
situation) worsened a great deal that the government revived an
old measure of established a new one to mitigate the situation.
Such short sighted policies did not succeed in solving problems
on long term basis. It is high time that the instruments of
government policy are geared to solving the marketing problems
on long term basis.