CHAPTER ONE

MARKETING EFFICIENCY
ITS DEFINITION AND MEASUREMENT

1.1 Introduction

Marketing efficiency implies the use of the best and low cost methods of marketing with the maximum effectiveness to reduce costs, margins, spoilage, waste and price spreads in the whole marketing system and preferably all agricultural markets. It can also imply avoiding wasteful expenditure, improvements in marketing function, value addition to commodities, resulting in direct gains to producers including farmers in the form of higher farm prices or to consumers through lower selling prices or to both producers and consumers by way of reducing the price spread which stimulates consumption and production significantly, raising overall individual, national as well as international income and profit substantially. The total income, profit and satisfaction of producers and consumers are directly related to marketing efficiency that results in direct gain to the farmers as well as consumers. Hence, marketing efficiency is the crux of agricultural marketing.

Division of labour and specialization in occupations in the rural economy has led to a clear demarcation between production and marketing activities. Progressive advancement from self-sufficient forms of living to market oriented production has fostered the emergence of a group of functionaries who perform the important task of marketing and distribution. The marketing function has been variously defined. Most commonly it is described as the process of apportioning of the surplus of agricultural sector into its various uses. This definition does not emphasize sufficiently those marketing activities that play an essential part in the
economic system, permit the exploitation of "the principle of comparative advantage" and have significant effect on production and consumption processes. An efficient marketing scheme plays an important role in maximizing an economy's aggregate production and wealth. (Jasdanwalla, 1966/p 1).

Efficiency in the physical handling of a product is often known as 'technical efficiency which is a matter of procedure, technique and scale of operation. New methods of storage, transportation, loading and unloading may reduce waste and prevent a drop in quality. The degree to which these physical savings manifest themselves as reductions in money costs depends very largely on economic environment in which marketing process operates. An economically efficient marketing system will transfer the benefits of the cost saving improvements in the marketing process to the producers as well as to the consumers. In order to ensure efficiency competition must prevail. Thus the more nearly perfect a market is, the closer it is to an economically efficient one.

However the efficiency of marketing system is to be judged not merely in terms of its ability to generate competitive prices, but also in terms of the degree to which it responds to the overall growth and distributive justice. For even if there is a competitive environment it may still possess undesirable features: - competitive prices in the short run may be far above or below the costs of production according as the situation is one of overall shortage or surplus. The prevailing price though competitive may have adverse effects on the growth of non-agricultural sector or on intersectoral income distribution.

This chapter is organised as follows. In section 1.2 we have discussed the need for the study. Definition of marketing efficiency and its measurement are considered in section 1.3. In section 1.4 and in its several subsections we have presented a brief profile of the study area viz. Hooghly district. The rationale for the choice of the commodities has been presented in section 1.5. In section 1.6
we have explained the objectives of our study. Section 1.7 concludes the chapter.

1.2 Need for the Study

A well-organised network of agricultural markets easily accessible to all the widely scattered producers will help to overcome the difficulty that the agricultural sector faces because of the fixed locations of the farms. There are other reasons as well for paying special attention to the marketing of agricultural produce. Relatively greater perishability of agricultural produce reduces the bargaining power of the producers. The smaller disposal of agricultural produce of small size of farms, which is common feature of the underdeveloped countries leads to higher cost of marketing per unit of crop. Yearly variation in crop production, especially those resulting in glut may also result in financial loss to the farmers if adequate marketing facilities are not available.

An efficient marketing system is essential for developing and also maximizing returns from agricultural production. In this regard Abott (1967) has pointed out that

- An efficient market acts as a bridge between the producer and the consumer. It is through the market that production pattern is changed according to the requirements of the consumers.
- Cash returns to the producers depend upon the efficiency of the marketing organization.
- Improved facilities and organization for marketing may be essential if full advantage is to be taken of favourable production opportunities. Owing to poor transport facilities, high marketing margin and risk allowances due to inefficient marketing structure or other cost factors, production of agricultural crops for use by the non farm sector may become uneconomic.
An efficient marketing system is also necessary for ensuring the supply of agricultural inputs at reasonable costs and

The developing marketing system will help in the development of the service sector also. (Abott, 1967)

Increased agricultural productivity due to the functional improvements relating to science and craft will be translated into a proportionate increase in the level of real income in an economy if the distributive system in the economy is efficient. The relation between the emergence of surpluses and efficient market is two fold. A large marketing surplus necessitates an efficient marketing system and an efficient marketing system has a powerful stimulating effect on the emergence of additional surpluses.

Efficient marketing (including efficient pricing) is desirable in and of itself because it leads to maximize welfare from the given output. When pricing is efficient, shortages and surpluses will not exist in different areas of the country at the same time or at different times of the year in the same area. (Cumminngs Jr. R.W., 1967 /p 6)

More important to economic development however, efficient pricing is a necessary means toward the goal of maximizing economic growth over time. [Balassa, Wiles, Hayek & Johnson]. Assuming that economic units respond rationally to economic incentives, the marketing system, which accurately transmits economic signals, will promote more rapid growth by the agricultural sector as well as by the total economy. As a result of increased agricultural production, producers will have higher incomes, consumers will have relatively lower prices and middlemen will have greater profits. The objectives of the different groups in the economy, which often appear to be in conflict and contradictory in the short run can be satisfied with rapid economic growth (Cummings, 1967 / p 7).
Many developing countries have taken the policy of liberalisation of food markets. It is generally argued that liberalisation is required for achieving allocative efficiency and long-term growth in agriculture. Food market integration is a pre-condition for the success of such liberalisation. Producers and consumers may not gain from liberalisation if the markets are not spatially and temporally integrated. If the markets are not integrated the correct price signals will not be transmitted through the marketing channels. Spatial market integration refers to a situation in which prices of a commodity in spatially separated markets move together and price signals and information are transmitted smoothly across the markets. On the other hand temporal integration implies that over time price variation approximates costs of holding stocks including interests on investment in stocks.

1.3 Marketing Efficiency – Definition and Measurement

Marketing efficiency is defined in several ways. According to Acharya and Agarwal (1987), the concept of marketing is so broad and dynamic that no single definition encompasses all of its theoretical and practical implications. Clark (1954) defines marketing efficiency as having the three components; the effectiveness with which a marketing function or service is performed, the cost at which the service is performed and the effect of this cost and the method of performing the service on production and consumption.

According to Jasdanwalla (1966 / p 2-3) marketing efficiency can be broadly defined as the effectiveness or competence with which a structure performs its designated functions. In distribution it may pertain to technical competence or economic efficiency. Technical efficiency relates to such matters as mechanization of individual work process. To be technically efficient a marketing structure would have to utilize the best method available for every marketing job and to use these methods with maximum effectiveness.
Economic efficiency on the other hand implies realization of maximum output from the given resources. Alternatively it is the minimization of the amount of inputs required for given output of goods and services. It involves the elimination of wastes, high costs and exploitative profits. The principal means of ensuring this elimination is pressure of competition (Jasdanwalla, 1966).

Khols (1980) defines marketing efficiency as the ratio of marketed output or satisfaction to marketing input or cost of resources. An increase in this ratio represents increased efficiency and a decrease denotes low efficiency.

A major objective of most of the studies of agricultural marketing mostly involving food grains in India has been to find out how efficient the agricultural markets are and how legitimate would be the government intervention in these markets. The norm of efficiency adopted in these studies has been: close correspondence between costs of marketing service and distributive margins. An efficient market must transmit the benefits of any innovation that may take place in marketing service to the producers as well to consumers in the form of reduction in money costs. Presence of competition can only ensure this. Therefore very often competitiveness is substituted for efficiency in market studies. In most of these studies two distinct approaches have been adopted: (1) an analysis of the functioning of the market using structure – conduct – performance framework and (2) an analysis of marketing margin and price spread at various stages of movement of a farm product from producers to the final consumers.

The first approach is based on an identification of competitive market as an efficient market. It therefore substitutes a test of competitiveness for the test of efficiency. Textbook conditions of competitiveness are admittedly difficult to apply in practice. To obviate these difficulties a framework is used comprising three simple concepts – market structure, market conduct and market performance. Market structure consists of relatively stable features of the environment that influence the rivalry among the buyers and sellers operating
within it. Market conduct consists of policies that participants adopt towards the market with regard to their price, the characteristics of their products and other terms that influence the other transactions. Market performance is normative appraisal of the social quality of allocation of resources that result from a market's conduct. It is reflected in limiting the rate of profit within the normal range, close integration among spatially and temporally separated markets leading to removal of excess profit in any market through efficient allocation of supply and high responsiveness of prices to cost.

With the help of the time series price data inter-market price correlation coefficients are often computed to indicate the degree of market integration. High correlation coefficients reveal close correspondence among markets, which is regarded as an index of efficiency. It establishes real or potential allocation of supply among markets in response to demand in such a fashion as to ensure price movements in different markets in union, removing a chance of excess profit in any market and fulfilling an important condition of competition.

Some economists have pointed out that price correlation coefficient can not be an adequate index of what has been stated above unless the prices are de-trended and de-seasoned to isolate the effects of marketing forces (Blyn, 1973). Increase of population growth, for example, may give rise to linear trends and such trends show perfect correlation even if the markets in question are not at all integrated. Moreover seasonal variations may be synchronized, for example, due to common climate pattern with planting and harvesting taking place at the same time in all the areas that are served by markets included in the sample. This would lead to spurious correlation, even when there is no or little contact between markets (Lundhal and Peterson, 1982). The correlation method has also been criticized by Barbara Harriss (1996) on the ground that a high correlation between two markets does not necessarily mean that two markets are well integrated in the sense that a competitive network of traders exists which ensures that agricultural goods move between market places in swift response to
price differences that exceed transport costs (Harriss, 1993). We cannot infer the presence or absence of interaction among the concerned markets, physical or potential, solely from correlation coefficient. But for that reason correlation coefficient cannot be ruled out as totally irrelevant. Only it needs to be backed up by some additional evidences of competitive conditions like low inter-market price differentials, possibility of inter-market trade etc. (Bhattacharya, 1992). To avoid the methodological limitations of correlation studies a new method has been developed in the theory of time series econometrics in the form of cointegration test to test market integration.

Under the second approach a detailed marketing margin study has been made in estimating the difference between the cost of and the receipts from handling the commodity at every stage. This difference should not exceed the normal return for the service rendered in the respective stages to fulfill the conditions of efficiency.

But as a method of assessing the competitiveness or efficiency of agricultural markets the margin study may confront several problems. The observed margin spread over different regions may legitimately exceed transport cost to ensure a normal return to traders concerned. The difficulty is to determine the acceptable limit of this normal return or to explain loss if margins do not exceed costs or oscillations of profit and loss (Harriss, 1979). In any market, particularly in agricultural markets such problems are likely to exist. Market efficiency in such cases hinges on the capacity of the long run average price to cover long run average cost plus normal rate of return. This criterion can take care of situation of temporary loss or oscillations of margins. In a partial market study the acceptable limit of normal return may possibly be taken to be equal to any objectively determined or socially approved rate, for instance the difference between the highest lending rate and the highest borrowing rate of a commercial bank (Bhattacharya, 1992). It would perhaps be too much to ask for completely value free determination of the acceptable limit of the normal return.
1.4 Brief Profile of Hooghly District

In 1875 Burdwan district was divided into two parts, the northern division was called Burdwan and the southern division was named Hooghly. At that time the Bengal presidency was divided into 14 districts of which Hooghly was one. It is surrounded by Burdwan district in the North, Hooghly River in the East, Howrah district in the South and Paschim Midnapur, Bankura and Burdwan districts in the West. The total area of the district is 3149 sq km, which is 3.55% of the total area of West Bengal (88752 sq km). There are four sub-divisions in the district namely Hooghly Sadar, Chandannagar, Serampore and Arambag. The headquarter of the district is Chinsurah. In 2003 there were one corporation, eleven municipalities, eighteen blocks, eighteen Panchayat Samities and 210 Gram Panchayats in the district.

In spite of being one of the most important industrial districts in West Bengal, Hooghly district has about 70% of its population dependent on agriculture and the district represents an important place in the field of agriculture in the state. Potato and rice are among the most important crops in Hooghly district. India is the fifth largest producer of potato in the world. According to the statistics of 2004-05 West Bengal ranks second in India in terms of potato production after Uttar Pradesh. However, with regard to productivity West Bengal is ranked no. 1. Nearly 30% of the potato produced in West Bengal was grown in Hooghly district in 2002-03 and the district occupies first position in the state in terms of productivity. India has the largest area under production of rice crop and ranks second in the world in production next to China. Productivity of rice in West Bengal during 2000-01 was 2296 kg/hectare, higher than the average productivity in India (1986 kg/ hectare). During the same period productivity of potato in Hooghly district was 2527 kg/ha higher than the state average.
1.4.1 Demographic Features

According to Census Report of 2001 total population in the district was 5041976, which was 6.29% of total population of West Bengal. The population density in the district was 1601 per sq km, which was higher than the population density of the state (903 per sq km). In 2001 the percentage of rural population in Hooghly district was 66.53% lower than the state average of 72.03%.

1.4.2 Land Utilisation

The land use pattern in a region dictates the type of economic activity that can normally flourish there. The land utilization pattern is shown in table 1.1. In Hooghly district 72.12% of the total area was cultivated in 2002-03 which was higher than the state average (65.96%).

Table 1.1. Classification of Land Utilisation Statistics in Hooghly District

(in thousand hectares)

<table>
<thead>
<tr>
<th>Year</th>
<th>Reporting Area</th>
<th>Forest Area</th>
<th>Area under non-agricultural use</th>
<th>Barren, Uncultivable land</th>
<th>Net area sown</th>
<th>Permanent pastures and other grazing land</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>312.22</td>
<td>0.65</td>
<td>74.60</td>
<td>0.24</td>
<td>230.55</td>
<td>0.30</td>
</tr>
<tr>
<td>2001-02</td>
<td>312.22</td>
<td>0.65</td>
<td>78.12</td>
<td>0.23</td>
<td>225.91</td>
<td>0.03</td>
</tr>
<tr>
<td>2002-03</td>
<td>312.22</td>
<td>0.65</td>
<td>82.68</td>
<td>0.13</td>
<td>225.96</td>
<td>0.00</td>
</tr>
<tr>
<td>2003-04</td>
<td>312.22</td>
<td>0.53</td>
<td>80.54</td>
<td>0.97</td>
<td>215.17</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Source: District statistical handbook, Bureau of Applied Economics and Statistics, Government of West Bengal
1.4.3 Land Ownership Structure

The operational holdings are classified in five major groups according to the size, Marginal (with area less than 1 hectare), Small (area 1 hectare or above but less than 2 hectares), Semi Medium (area 2 hectare and above but less than 4 hectare), Medium (area 4 hectares and above but less than 10 hectares) and Large (10 hectares and above, which are mostly institutional holdings). The total number of operational holdings in 1990-91 was 329790, which rose to 332008 in 2000-01. There has been a 5.42% increase in the number of marginal holding during 1990-91 to 2000-01.

Table 1.2 Distribution of Operational Holdings according to size-class in Hooghly District in 2001

<table>
<thead>
<tr>
<th>Type of operational holding</th>
<th>Number of holding</th>
<th>Area of holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal</td>
<td>284330</td>
<td>125391</td>
</tr>
<tr>
<td>Small</td>
<td>38309</td>
<td>61856</td>
</tr>
<tr>
<td>Semi-medium</td>
<td>8377</td>
<td>24778</td>
</tr>
<tr>
<td>Medium</td>
<td>977</td>
<td>5380</td>
</tr>
<tr>
<td>Large</td>
<td>15</td>
<td>304</td>
</tr>
<tr>
<td>Total</td>
<td>332008</td>
<td>217709</td>
</tr>
</tbody>
</table>

Source: District statistical handbook, Bureau of Applied Economics and Statistics, Government of West Bengal

Average size of holding 0.66. Marginal: Below 1.0 hectare. Small: 1.0 hectare and above but less than 4.0 hectare. Semi Medium: 2.0 hectare and above but less than 4.0 hectare. Medium: 4.0 hectare and above but less than 10.0 hectare
Large: 10.0 hectare and above

The area under marginal holding increased by 13.70% during this time period. The number of small, semi medium and medium size holdings decreased by 13%, 40.22% and 51.78% respectively. Though the number of large holding decreased from 101 in 1985-86 to 6 in 1990-91, it rose to 15 in 2000-01. During this period the area under large holding increased by 322%. We can see that
most of the operational holdings (85%) in Hooghly district in 2000-01 are marginal and they contributed nearly 58% of total area under production in the district. The distribution of operational holdings according to size class in the district has been shown in table 1.2.

1.4.4 Irrigation Facility

Hooghly district has good irrigational facilities. In 2003-04 the percentage of net irrigated area was 72.53% of the net-cropped area in the district. Government canal, tank, deep tube-well, shallow tube-well, river lift irrigation are the important sources of irrigation in the district. There has been a 229.16% increase in the area under irrigation in Hooghly district from 1960-61 to 2003-04. The number of deep tube-well has increased by 18.47% during 1999 to 2003. The number of shallow tube well and river lift irrigation increased by 6.42% and 5.49% respectively during the same period. There was no change in the number of other sources of irrigation. The different sources of irrigation are shown in table 1.3.

Table 1.3 Area Irrigated by Different Sources in Hooghly District in 2003-04

<table>
<thead>
<tr>
<th>Source of irrigation</th>
<th>Number</th>
<th>Area irrigated (in thousand hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Canal</td>
<td></td>
<td>101.951</td>
</tr>
<tr>
<td>Tank</td>
<td>18633</td>
<td>33.343</td>
</tr>
<tr>
<td>High Capacity Deep Tube-well</td>
<td>449</td>
<td>17.960</td>
</tr>
<tr>
<td>Middle Capacity Deep Tube-well</td>
<td>46</td>
<td>0.920</td>
</tr>
<tr>
<td>Low Capacity Deep Tube-well</td>
<td>926</td>
<td>3.704</td>
</tr>
<tr>
<td>Shallow tube-well</td>
<td>23134</td>
<td>144.888</td>
</tr>
<tr>
<td>River Lift Irrigation</td>
<td>346</td>
<td>47.720</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>351.218</td>
</tr>
</tbody>
</table>

Source: District statistical handbook, Bureau of Applied Economics and Statistics, Government of West Bengal
1.4.5 Infrastructure Facility

Infrastructure plays a very important role in marketing of agricultural commodities. Without a good transport system especially linking villages with the markets the producers may not be able to bring their product in the market and the marketing system will become inefficient. Hooghly district has good infrastructure.

Table 1.4 Ratio of Length of Road and Geographical Area in Hooghly District and West Bengal

<table>
<thead>
<tr>
<th>Type of Road per Geographical Area</th>
<th>Hooghly</th>
<th>West Bengal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfaced road per geographical area</td>
<td>1.275</td>
<td>0.203</td>
</tr>
<tr>
<td>Un-surfaced road per geographical area</td>
<td>1.574</td>
<td>0.205</td>
</tr>
<tr>
<td>Total</td>
<td>2.849</td>
<td>0.408</td>
</tr>
</tbody>
</table>

Source: District statistical handbook, Bureau of Applied Economics and Statistics, Government of West Bengal

Figure 1.1. Ratio of Length of Road and Geographical Area in Hooghly District and West Bengal

Source: District statistical handbook, Bureau of Applied Economics and Statistics, Government of West Bengal
The district is well connected by railways and roadways. Grand Trunk Road, newly built Durgapur Expressway provide good transport facilities to the district. Six routes of Eastern Railway pass through this district. River Hooghly provides the facility of water transport. In table 1.4 we make a comparison of surfaced and un-surfaced road between the state and Hooghly district. From the table we can see that Hooghly district has very good infrastructure in comparison with the state.

1.4.6 Growth of Cold Storage Facility in Hooghly District

Potato is more perishable than rice and cold storage provides the facility to preserve the quality of potato, even placement of the commodity in the market and stabilisation of prices by removing the gluts occurring in the production season. In this section we shall examine the growth of cold storage facility in the district from 1999 to 2004.

Table 1.5 Growth of Cold Storage Facility in Hooghly District from 1999 to 2004

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of cold storages</th>
<th>Capacity (in 000 tonnes)</th>
<th>Production of potato (in 000 tonnes)</th>
<th>Capacity as % of production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>118</td>
<td>1414</td>
<td>1645.6</td>
<td>85.93%</td>
</tr>
<tr>
<td>2000</td>
<td>121</td>
<td>1418.2</td>
<td>1725.7</td>
<td>82.18%</td>
</tr>
<tr>
<td>2001</td>
<td>122</td>
<td>1431</td>
<td>2337.7</td>
<td>61.21%</td>
</tr>
<tr>
<td>2002</td>
<td>128</td>
<td>1560</td>
<td>2356.4</td>
<td>66.20%</td>
</tr>
<tr>
<td>2003</td>
<td>130</td>
<td>1500*</td>
<td>2247.5</td>
<td>66.74%</td>
</tr>
<tr>
<td>2004</td>
<td>130</td>
<td>1500</td>
<td>2389.4</td>
<td>62.78%</td>
</tr>
</tbody>
</table>

* three cold storages were not functioning in 2003
Source: Assistant Director of Agricultural Marketing (Hooghly)
From Table 1.5 we can see that the rate of growth of capacity of cold storages was far lower than the rate of growth of production of potato. The rate of growth of production of potato in the district from 1999 to 2004 was 7.61%, which was far higher than the growth rate of capacity of cold storages for the same period (1.57%). In 1999 the cold storages could keep 85.93% of total production of potato in the district. But in 2004 the capacity of the cold storages was only 62.78% of the total production of the district. In Figure 1.2 we can see that from 2001 to 2004 there was no increase in the capacity of cold storages and capacity of cold storages were much lower compared to the previous years. Thus it is clear that the capacity of the cold storages in the district could keep pace with the production of potato in the district.
1.5 Rationale for the Choice of Commodities under Study

Potato is considered as the 'king' of food staples and hardly any kitchen is available where it is not used in routine. On account of its short duration, high yield potential character and high percentage of production being marketed potato is called a cash crop. It contains starch, sugar, cellulose, crude fibre, peptic substances, protein, lipids, vitamin C, enzymes, minerals (P, Ca, Mg, K, Fe, S) etc. which are considered useful for human health. Potato is produced in 137 countries in the world and India is the fifth largest producer of potatoes after China, Russia, Poland and USA. In 1998 productivity of potato in India was 19 tonnes/hecetae much higher than the world average 16.2 t/ha. Productivity of potato in West Bengal and Hooghly district were 21.02 t/ha and 22.57 t/ha respectively. In 2002-03 Hooghly district contributed 26.68% of the total area under cultivation of the state, which was highest among all the districts. During the same period Hooghly district produced 30.12% of the total production in the state, which was the highest again among all the districts. (Business Line, 18th January, 2008, The Tribune, 23rd April, 2001, India Together Potato farming and innovation, Civil Society Information Exchange Pvt. Ltd.)

Rice is the most important cereal food crop in India. It contains starch, sugar, cellulose, protein, lipids, vitamin A, enzymes, minerals (Ca, Mg, K, S) etc. It plays vital role in national foodgrain supply. Rice contributes 43% of total foodgrain production and 46% of the total cereal production of the country. Among the rice growing countries in the world India has largest area under rice crop and ranks second in production next to China. Average rice productivity in India during 1999-2000 was 1986 kg/ha, which is about 23% below world average productivity of 2563 kg/ha during the same year. During the same period productivity of rice in West Bengal and Hooghly district were 2237 kg/ha and 2460 kg/ha. The district ranked fourth in terms of productivity of rice during 1999-2000. Hooghly district contributed 5.22% of the total area under cultivation of rice.
of the state in 2002-03. (E:\eco\Rice Productivity Analysis – 01.htm, E:\30th Jan\h2.htm)

Though rice is the prime crop in Hooghly district the agricultural economy of the district largely depends on potato, jute, vegetables and orchard. Among the six important crops namely potato, rice, wheat, jute, pulses and oilseed; Hooghly district contributed the highest area under production of potato. In West Bengal productivities of potato and jute are highest in the district. Since we are interested in comparing the efficiency of the markets of most important staple food and the most important cash crop in the district we have selected potato and rice as the two commodities to estimate the efficiency of their marketing systems.

1.6 Objectives of this Study

The aim of this study is to discuss different aspects of marketing of potato and rice in Hooghly district and estimate the efficiency of the marketing systems of these two agricultural commodities. The different objectives of our study are discussed in the following:

1. To estimate the impact of Operation Barga and Liberalisation Policy of 1991 on production, area under production and productivity of some important crops viz. potato, rice, wheat, jute, pulses and oilseed.
2. To analyse the price structure of potato and rice in Hooghly district.
3. To verify whether seasonality is present in wholesale and retail prices of potato and rice and estimate the relationship between wholesale and retail prices.
4. To estimate the trends in wholesale and retail trade margins and their relationship with changes in harvest prices.
5. To examine the efficiency of potato and rice marketing on the basis of secondary data.
6. To examine the efficiency of potato and rice marketing on the basis of primary data.
7. To make necessary policy guidelines on the basis of the findings of our study.

1.7. Plan of Our Study

We begin with the introduction to the topic and objectives of this study in the first chapter. In the second chapter we shall make an overview of marketing studies in India and abroad. We shall present the econometric model, methodology and database in the third chapter. We shall analyse the secondary data and derive the results in the fourth chapter. In the fifth chapter we shall make the analysis of the primary data and in the final chapter we are going to make conclusions of this study and prescribe the policy measures on the basis of the findings of this study.

1.8 Conclusion

In this introductory chapter we have attempted to discuss some concepts related to the topic, a brief profile of Hooghly district and objectives of our study. In the next chapter we shall critically examine some studies made in India and abroad on this topic.