

are estimated between time series of spot prices for a commodity from different market locations. A statistically significant correlation is taken to imply market integration. Examples of studies using this technique are Lele<sup>7&8</sup>, (1967, 1971), Jones<sup>9</sup> (1968) and Acharya<sup>10</sup> (1988). However, there are serious problems with this method. A high-level correlation can by no means indicate the integration of markets. Further, markets may well be integrated and yet have low correlations (Blyn<sup>11</sup>, 1973, Harriss<sup>12</sup>, 1979). Thus, the correlation coefficients can only serve as indicators of likelihood of market integration.

2. Ravallion Procedure – The Ravallion procedure (Ravallion<sup>13&14</sup>, 1986, 1987), which is an extension of static correlation method, avoids the main inferential dangers and is able to extract more information about markets than by the statistical correlation method. However, there are also some limitations associated with this method.

3. Co-integration Approach – The co-integration approach does not possess the problems associated with the earlier approaches. The co-integration approach has been used in spatial market analysis by Goodwin and Schroeder<sup>15</sup> (1991), Palaskas and Harriss White<sup>16</sup> (1993), Alexander and Wyeth<sup>17</sup> (1994) and Dercon<sup>18</sup> (1995).

It has been argued that all the above approaches rely on price data alone and fail to recognize the pivotal role of transfer costs (Baulch<sup>19</sup>, 1997).

4. Parity Bound Models (PBM) – Parity Bound Models approach allows transfer costs to vary between periods and thus assumes no specific model of marketing margins. This model can also be estimated by using incomplete time series, which is often the case with price data in many developing countries. One of its limitations, however, lies in the requirement of data on mean transfer costs, which are rarely available. Unless the estimates of transfer costs are accurate, the whole market integration test would be suspect. Further, since only contemporaneous spreads are used in its estimation, it is hard for the PBM to take into account the type of lagged price adjustment postulated by the Granger Causality and Ravallion models. It is, therefore, advisable to estimate the PBM with price data that have been measured at a low frequency (*e.g.*, on a monthly or quarterly basis) in order to allow sufficient time for intermarket arbitrage to occur. However, the estimation of PBM at present appears to be a complicated process.

Though none of the techniques available at present is satisfactory, preference is given to co-integration method and results are interpreted with the help of other relevant information about the markets being studied.

#### **CO-INTEGRATION OF INDIAN AGRICULTURAL MARKETS**

Co-integration analysis is another mathematical tool to analyze the integration and thereby the efficiency of the marketing system. The results of a comprehensive study by Wilson<sup>20</sup> (2001) have been summarized by Acharya<sup>21</sup> (2003). Wilson analyzed the integration of markets for three impor-

tant cereals (rice, wheat and jowar) and for rapeseed-mustard and groundnut by using co-integration technique. He used month-end wholesale prices for 18 years for 14 markets for wheat, 36 markets for paddy/rice and 13 markets for jowar. The summary results are presented in Table 9.3.

**Table 9.3**  
**Price Integration of Wholesale Markets for Foodgrains and Oilseeds in India**

Crop	No. of Markets	Area	Period	Correlation Coefficient Exceeded the Value in Percent Market Pairs		
				0.6	0.8	0.9
Wheat	10 Markets (Month- end WSP)	Different States	1982-1988	62	31	6
	10 Markets (Month-end WSP)		1992-1998	80	64	42
Paddy	5 Markets (Monthly WSP)	Different States	1981-1988	70	-	-
	15 Markets (Monthly WSP)		1991-1998	65	13	-
Jowar	7 Markets (Monthly WSP)	Different States	1981-1988	-	-	-
	11 Markets (Monthly WSP)		1991-1998	70	32	2
Rapeseed-	8 Markets (Monthly WSP)	Different States	1982-1987	100	93	25
Mustard	8 Markets (Monthly WSP)		1992-1997	68	33	32
Groundnut	5 Markets (Monthly WSP)	Different States	1980-1988	100	40	20
	5 Markets (Monthly WSP)		1990-1998	100	70	-

Source: Acharya, S.S. (2001), Domestic Agricultural Marketing Policies, Incentives and Integration, in the book Indian Agricultural Policy at the Crossroads, Acharya, S.S. and D.P. Choudhri (Ed.), Rawat Publications, Jaipur, pp. 184-192.

- (i) *The results for wheat reveal that*
- Market adjustment has been fast during both the eighties and nineties;
  - The degree of market integration for the nineties has been considerably higher than during the eighties; and
  - The markets which demonstrated a higher degree of integration during eighties have certainly become more integrated during the nineties.
- (ii) *The results for paddy/rice show that*
- The markets for rice also adjust relatively rapidly; and
  - The markets during nineties are integrated to a higher degree compared to that during the eighties.
- (iii) *The results for jowar reveal that markets exhibit significantly rapid contributing adjustments. However,*
- The integration is of much lower degree as compared to wheat and rice; and

(b) Market integration for jowar during the nineties does not appear to be higher than that during the eighties.

(iv) *The results for rapeseed and mustard reveal*

(a) The increasing degree of market integration for rapeseed-mustard in the post-liberalization period;

(b) The integration among markets for rapeseed-mustard also appears to be reasonably high during both the eighties and nineties; and

(c) The results based on co-integration analysis by Wilson, however, reveal that the rapeseed-mustard markets starting from a very low degree of integration during eighties have become more integrated during the nineties.

(v) *The prices of groundnut reveal*

(a) A higher degree of co-movement in the nineties compared to that in eighties. The correlation coefficients were greater than 0.7 for 92 percent market pairs during the nineties as compared to only 38 percent market pairs during the eighties;

(b) As regards the groundnut oil, the markets were highly integrated both during eighties and nineties; and

(c) The results based on co-integration analysis by Wilson reveal that in the case of groundnut markets, integration continues to be low.

## MARKETING EFFICIENCY

Marketing efficiency is essentially the degree of market performance. In this sense the concept is broad and dynamic. It encompasses many theoretical manifestations and practical aspects. Broadly, one may look at efficiency of a market structure through the following:

(i) whether it fulfils the objectives assigned to it or expectations from the system at minimum possible cost or maximises the fulfilment of objectives with given level of resources (or costs); and

(ii) whether it is responsive to impulses generated through environmental changes and whether impulses are transmitted at all levels in the system. Expectations from or objectives assigned to the system are of critical importance in assessing the efficiency because various participants have different expectations from the system, which quite often conflict with each other. For example:

(i) Farmers expect quick market clearance and higher prices for their produce. They expect the market to buy the products when they are offered for sale at reasonable prices;

(ii) Consumers expect ready availability of products in the form and quality desired by them at lower prices;

(iii) Traders and other functionaries expect steady and increasing in-

comes; and

(iv) Government expect the system to safeguard the interest of all the three sections and in a proportion which is considered to be fair so that overall long-run welfare of the society is maximised.

#### **DEFINITION OF MARKETING EFFICIENCY**

The concept of marketing efficiency is so broad and dynamic that no single definition encompasses all of its theoretical and practical implications. Some of the definitions are given below:

Kohls and Uhl<sup>22</sup>: Marketing efficiency is the ratio of market output (satisfaction) to marketing input (cost of resources). An increase in this ratio represents improved efficiency and a decrease denotes reduced efficiency. A reduction in the cost for the same level of satisfaction or an increase in the satisfaction at a given cost results in the improvement in efficiency.

Jasdanwalla<sup>23</sup>: The term marketing efficiency may be broadly defined as the effectiveness or competence with which a market structure performs its designated function.

Clark<sup>24</sup>: Marketing efficiency has been defined as having the following three components:

- (i) The effectiveness with which a marketing service is performed;
- (ii) The cost at which the service is performed; and
- (iii) The effect of this cost and the method of performing the service on production and consumption.

Of the three components, the last two are the most important because the satisfaction of the consumer at the lowest possible cost must go hand in hand with the maintenance of a high volume of farm output.

#### **EFFICIENT MARKETING**

The movement of goods from producers to consumers at the lowest possible cost, consistent with the provision of the services desired by the consumer, may be termed as efficient marketing. A change that reduces the costs of accomplishing a particular function without reducing consumer satisfaction indicates an improvement in the efficiency. But a change that reduces costs but also reduces consumer satisfaction need not indicate increase in marketing efficiency. A higher level of consumer satisfaction even at a higher marketing cost may mean increased marketing efficiency if the additional satisfaction derived by the consumer outweighs the additional cost incurred on the marketing process.

An efficient marketing system for farm products ensures that:

- (i) Increase in the farm production is translated into a proportionate increase in the level of real income in the economy, thereby stimulating the emergence of additional surpluses;
- (ii) Good production years do not coincide with low revenues to the pro-

ducers achieved through effective storage, proper regional distribution and channelising of latent demand; and

(iii) Consumers derive the greatest possible satisfaction at the least possible cost.

An efficient marketing system is an effective agent of change and an important means for raising the income levels of the farmers and the levels of satisfaction of the consumers. It can be harnessed to improve the quality of life of the masses.

#### **APPROACHES TO THE ASSESSMENT OF MARKETING EFFICIENCY**

Traditionally, efficiency of the marketing system has been looked at from the following two angles:

##### **(i) *Technical or Physical or Operational Efficiency***

This aspect of the efficiency pertains to the cost of performing a function. Efficiency is said to have increased when cost of performing a function for each unit of output is reduced. This can be brought about either by reducing physical losses or through change in the technology of the function *viz.*, storage, transportation, handling, and processing. A change in the technique may result either in the reduction of per unit cost (storage cost for a month, transportation cost to a distance of 100 kms or the cost of converting 100 kg of oranges to orange juice) or the increase in the output for a given level of cost.

##### **(ii) *Pricing or Allocative Efficiency***

Pricing efficiency means that the system is able to allocate farm products either overtime, across the space or among the traders, processors and consumers (at a point of time) in such a way that no other allocation would make producers and consumers better off. This is achieved via pricing of the product at different stages, at different places, at different times and among different users and hence called pricing efficiency. In simple terms, the pricing efficiency is achieved when following conditions hold:

(a) Price differences between spatially separated markets do not exceed transportation cost;

(b) Intra-year price rise is not more than storage cost; and

(c) Price differences between forms of the product (pulse grain and split *dal* or wheat grain and wheat flour) do not exceed processing cost.

The pricing efficiency refers to the structural characteristics of the marketing system, where the sellers are able to get the true value of their produce and the consumers receive true worth of their money.

Whenever functions of transportation, storage and processing are performed, cost is incurred, value is added and the product is priced again. The efficiency of marketing is concerned with the extent to which the prices (after these functions are performed) deviate from what the cost of performing these functions warrant. The pricing aspect of marketing efficiency is affected

by the extent of competition, dissemination of market information and attitude of the functionaries.

Marketing efficiency in this context may be termed as the pricing efficiency of the marketing system. The relationships between marketing costs and marketing margins and that between gross margins and prices in spatially separated markets between or at different stages of marketing reflect this aspect of marketing efficiency.

The above two types of efficiencies are mutually reinforcing in the long run; one without the other is not enough.

#### **EMPIRICAL ASSESSMENT OF MARKETING EFFICIENCY**

Some simple measures to assess the efficiency of the marketing system for agricultural commodities are:

##### **(i) Ratio of Output to Input**

Conceptually, efficiency of any activity or process is defined as the ratio of output to input. If 'O' and 'I' are respectively output and input of the marketing system and 'E' is the index of marketing efficiency; then

$$E = \frac{O}{I} \times 100$$

A higher value of  $E$  denotes higher level of efficiency and vice versa. When applied in the area of marketing, output is the 'value added' by the marketing system and 'input is the real cost of marketing (including some fair margins of intermediaries)'. The measurement of 'value added' is not easy. The difference in the price at the farm level (price received by the farmer) and that at the retail level (price paid by the consumers) may be used to measure the 'value added' but it has limitations mainly because of market imperfections. Assuming that degree of imperfection is pervasive, this measure has been used to compare the marketing efficiency of two spatially separated markets, of two commodities or at two points of time. Consider the following examples of marketing efficiency.

Let there be two markets (or channels),  $A$  and  $B$ , for a commodity. The produce moves in both the markets. Let the marketing costs and value added in these markets be as given in Table 9.4. The efficiency measure is calculated as illustrated in Table 9.4.

The obvious conclusion is that market  $B$  is more efficient than market  $A$ , though marketing cost is higher in market  $B$ . But this conclusion may be misleading. It can be argued that consumers were charged three times the actual cost of marketing in market  $B$  whereas they were charged only twice in market  $A$ . Market  $B$  in fact could be less efficient than market  $A$ . One needs to go into the question of degree of competition in two markets.

**Table 9.4**  
**Marketing Efficiency of Two Hypothetical Markets**

Particulars	Market A	Market B
Total marketing cost incurred by all those involved (Rs./ton)	300	500
Value added measured in terms of difference in the consumer's price and price received by the farmer (Rs./ton)	600	1500
Marketing efficiency (E)	200	300

**(ii) Shepherd Approach**

Shepherd<sup>25</sup> suggested that the ratio of the total value of goods marketed to the marketing cost may be used as a measure of marketing efficiency. The higher the ratio, the higher efficiency and vice versa. This method eliminates the problem of measurement of value added. Consider the following example of working out the marketing efficiency of banana market using the Shepherd's formula:

The banana in Andhra Pradesh is sold either to the pre-harvest contractors or directly in the market eliminating the pre-harvest contractors. The costs and margins on sale of banana are shown in Table 9.5. It can be seen

**Table 9.5**  
**Estimates of Marketing Costs, Margins and Marketing Efficiency for Banana in Guntur District of Andhra Pradesh (1986-87)**

Particulars	(Rs. per 100 bunches)	
	Channel I (Contract Sale)	Channel II (Direct Sale)
1. Marketing costs incurred by producers	—	436.02
2. Marketing costs incurred by pre-harvest contractor	428.61	—
3. Margin of pre-harvest contractor	253.28	—
4. Marketing costs incurred by retailer	160.09	160.09
5. Marketing margin of retailer	308.25	308.25
6. Total costs and margins	1150.23	904.36
7. Retailer's sale price or consumer's purchase price	2106.38	2106.38
8. Net price received by the producer (7 - 6)	956.15	1202.02
9. Shepherd's Index of Marketing Efficiency (7 ÷ 6)	1.83	2.32
10. $7 \div (1 + 2 + 4)$	3.58	3.53

*Source:* Raju, V.T and M. Venkateswarlu, Marketing of Banana in Guntur District of Andhra Pradesh, Indian Journal of Agricultural Marketing, Vol. 3 (1), January-June, 1989, pp. 38-43.

clusions about the efficiency of alternative marketing channels/system. We discuss these aspects in the following sections.

### MARKETING COSTS AND EFFICIENCY

Generally, high marketing costs and margins are considered to be indicators of inefficiency in the marketing process. But this is not always true. The fact that a major part of the consumer's rupee is spent on marketing costs does not always mean that something is wrong with the distribution system. A number of factors may operate to cause a high proportion of marketing costs, without any reflection on the efficiency of the marketing system. These are as follows:

#### (i) *Place of Production*

The geographical localization of production brings about a change in the marketing costs. The example in Table 9.7 illustrates the effect of location on the cost of marketing. Let there be two areas —A and B; one near the market and other away from the market. The marketing cost in area A is 30 percent of the buyer's price; but it is 40 percent in area B. Nevertheless, the higher marketing cost in area B is not a reflection of the inefficiency of the marketing system.

**Table 9.7**  
**Effect of Geographical Location on Production and Marketing Costs**

Particulars	Production Areas	
	A	B
	(Near the Market)	(Away from the Market)
Cost of production/unit	0.70	0.60
Cost of marketing/unit	0.30	0.40
Buyer's price (Economic cost for the buyers)	1.00	1.00

#### (ii) *Time of Production*

Food articles are made available throughout the year, which is possible only by storage. This adds to the cost. The cost of goods sold in the off-season is higher than that in the peak season.

To understand this point, consider the case of wheat. The wheat is generally harvested in the end of March or first fortnight of April 2003. Threshing and winnowing also take time. Assume that the produce is ready for sale by the middle of April. A farmer in Hisar sold his produce in April, 2003 at a price of Rs. 500 per quintal. If this lot of wheat moves in its normal marketing channel and reaches a consumer in Delhi within say one week, the items of marketing



costs are octroi, unloading, market fee, weighment, commission etc. in the Hisar Market, and many such items in Delhi market including retailer's margin. Suppose all these items add up to Rs. 125 per quintal. This means that the consumer in Delhi pays a price of Rs. 625 per quintal in April, 2003.

If in the month of March, 2004, a retailer in Delhi sells wheat at a price of (say) Rs. 718 per quintal, it may be justified and may not indicate inefficiency of the marketing system. Some body in the marketing channel has stored this wheat for about 11 months. As the market rate of interest during 2003-04 was around 18 percent per annum, even if there was no increase in the cost of any other item, the interest alone on the value of one quintal of wheat amounts to about Rs. 82 if stored by the farmer and around Rs. 103 if stored by the retailer. Taking a middle position about the stage in the marketing channel where the wheat was stored for about 11 months, the total marketing cost of wheat sold in March, 2004 amounts to about Rs. 218 per quintal (93 + 125). In this case, the increase in the marketing cost does not reveal decrease in the marketing efficiency. This has been illustrated in Table 9.8.

**Table 9.8**  
**Effect of Sale in Different Seasons on Marketing Costs and**  
**Consumer's Price**

Particulars	(Rs. per quintal)	
	Sale to the consumers in	
	Post-harvest season	Lean season
Price received by the farmer	500	500
Cost of marketing	125	218
Consumer's price	625	718

**(iii) Form of Product**

The cost of marketing of a processed product is higher than that of a raw product. For example, the cost of marketing tomato juice (which includes cost of processing tomato) is higher than that of fresh tomatoes. But the high marketing cost because of processing is not an indicator of the inefficiency of the system. This changed form adds to the satisfaction of the consumers demand.

The farmer's share, whether it is higher or lower, in consumer's rupee is a measure of marketing efficiency. But there has been a decrease in the farmers share over time. This need not mean a decrease in the efficiency of the system. With the rise in the standard of living and income of the consumers, there is an increased demand for more processed materials and better marketing services, which increase the marketing costs and reduce the farmer's share. This decline in the farmer's share over time is not an adequate indica-

(a) Imperfect knowledge on the part of buyers and sellers of the demand and supply and other factors associated with the products;

(b) The existence of monopolistic conditions. Sometimes, there may be a single firm or a group of firms following some of the tactics for increased profits either by monopolising the situation or by price discrimination;

(c) *Interference of government in free market transactions*: Government interference in free market transactions in the economy in the form of restrictions on foodgrain movements, food zones and rationing which result in increasing the price differentials that are greater than the differentials in transportation, storage and/or processing costs, which ultimately reduce the efficiency of the marketing system.

In order to function with maximum efficiency, agricultural markets must satisfy most of the conditions of perfect markets. This is so because the requirements of an efficient marketing system coincide with the requirements of perfect markets. The conditions of perfect competition are:

(i) Existence of large number of buyers and sellers in the marketing system without collusion or agreements;

(ii) Perfect knowledge about market conditions and the logical utilization of that knowledge by all;

(iii) Homogeneity of the product; and

(iv) Free mobility of the buyers, sellers and products in the economy.

### **MARKETING COSTS, MARGINS AND PRICE SPREAD**

Market functionaries or institutions move the commodities from the producers to consumers. Every function or service involves cost. The intermediaries or middlemen make some profit to remain in the trade after meeting the cost of the function performed.

In the marketing of agricultural commodities, the difference between the price paid by consumer and the price received by the producer for an equivalent quantity of farm produce is often known as *farm-retail spread* or *price spread*. Sometimes, this is termed as *marketing margin*. The total margin includes:

(i) The cost involved in moving the product from the point of production to the point of consumption, *i.e.*, the cost of performing the various marketing functions and of operating various agencies; and

(ii) Profits of the various market functionaries involved in moving the produce from the initial point of production till it reaches the ultimate consumer. The absolute value of the marketing margin varies from channel to channel, market to market and time to time.

### **CONCEPTS OF MARKETING MARGINS**

There are two concepts of marketing margins.

**(i) Concurrent Margins**

These refers to the difference between the prices prevailing at successive stages of marketing at a given point of time. For example, the difference between the farmer's selling price and retail price on a specific date is the total concurrent margin. Concurrent margins do not take into account the time that elapses between the purchase and sale of the produce.

**(ii) Lagged Margins**

A lagged margin is the difference between the price received by a seller at a particular stage of marketing and the price paid by him at the preceding stage of marketing during an earlier period. The length of time between the two points denotes the period for which the seller has held the product. The lagged margin concept is a better concept because it takes into account the time that elapse between the purchase and sale by a party and between the sale by the farmer and the purchase by the consumer.

The method of calculating lagged margins is based on the same principle as that involved in the *first in-first out* method of accounting. However, it is difficult to obtain data on time lags between purchase and sale with a view to maintaining continuous series of marketing margins.

**IMPORTANCE OF STUDY OF MARKETING MARGINS AND COSTS**

Studies on marketing margins and costs are important, for they reveal many facets of marketing and the price structure, as well as the efficiency of the system.

(i) The magnitude of the marketing margins relative to the price of the product indicates the efficiency or otherwise of the marketing system. It refers to the efficiency of the intermediaries between the producer and the consumer in respect of the services rendered and the remuneration received by them. While comparing the efficiency of the marketing system by means of marketing margins over space or time, the difference in the value added to the product through various services/functions is taken into account;

(ii) Such studies help in estimating the total cost incurred on the marketing process in relation to the price received by the producer and the price paid by the consumer. The cost incurred by each agency in different channels and the share of each agency in the cost have been revealed. This knowledge ultimately helps us to identify the reasons for high marketing costs and the possible ways of reducing them; and

(iii) The knowledge of marketing margins helps us to formulate and implement appropriate price and marketing policies. Excessive margins point to the need for public intervention in the marketing system.

**ESTIMATION OF MARKETING MARGINS AND COSTS**

Regular monitoring of marketing margins at regional levels are essential

*Commodities*

(a) For perishable farm products like fruits, vegetables and milk, where the time lag between the commodity entering the marketing system and the time of final consumption is very small.

(b) Commodities which require processing before sale to consumers such as paddy, oil-seeds, etc.

(c) Commodities not requiring processing before sale to consumers, such as wheat, maize, bajra, jowar, etc.

*Method Recommended*

Chasing of lot or consignment method.

Concurrent margins should be calculated by finding the differences in the prices prevailing on the same date at successive levels of marketing.

By comparing the prices prevailing at successive levels of marketing on the same date either for the same market or for a pair of markets.

Irrespective of the method followed, the following information is required for computing marketing costs and margins:

- (a) Data on prices of the same variety and quality of the commodity at different stages of marketing, either for one market or for a pair of markets;
- (b) Data on marketing charges in cash or kind;
- (c) Cost of transportation of the produce at different levels of marketing;
- (d) Cost of processing and estimates of the conversion factor from the raw material to finished products;
- (e) Cost of all other operations in the marketing process.

Various measures of the price spread and for the computation of marketing costs and margins, and the procedures followed have been given in the paragraphs that follow.

**Producer's Price**

This is the net price received by the farmer at the time of first sale. This is equal to the wholesale price at the primary assembling centre, minus the charges borne by the farmer in selling his produce. If  $P_A$  is the wholesale price in the primary assembling market and  $C_F$  is the marketing cost incurred by the farmer, the producer's price ( $P_F$ ) may be worked out as follows:

$$P_F = P_A - C_F$$

**Producer's Share in the Consumer's Rupee**

It is the price received by the farmer expressed as a percentage of the retail price (*i.e.*, the price paid by the consumer). If  $P_r$  is the retail price, the producer's share in the consumer's rupee ( $P_s$ ) may be expressed as follows:

$$P_S = (P_F \div P_i) 100$$

### Marketing Margin of a Middleman

This is the difference between the total payments (cost + purchase price) and receipts (sale price) of the middleman (*i*th agency). Three alternative measures may be used.

(a) Absolute margin of *i*th middleman ( $A_{mi}$ )

$$A_{mi} = P_{Ri} - (P_{pi} + C_{mi})$$

(b) Percentage margin of *i*th middleman ( $P_{mi}$ )

$$P_{mi} = \frac{P_{Ri} - (P_{pi} + C_{mi})}{P_{Ri}} \times 100$$

(c) Percentage mark-up of *i*th middleman ( $M_i$ )

$$M_i = \frac{P_{Ri} - (P_{pi} + C_{mi})}{P_{pi}} \times 100$$

where

$P_{Ri}$  = Total value of receipts per unit (sale price)

$P_{pi}$  = Purchase value of goods per unit (purchase price)

$C_{mi}$  = Cost incurred on marketing per unit

The margin thus calculated include the profit of the middleman and the returns which accrue to him for storage, the interest on capital and overhead, and establishment expenditure.

### Total Cost of Marketing

The total cost, incurred on marketing either in cash or in kind by the producer seller and by the various intermediaries involved in the sale and purchase of the commodity till the commodity reaches the ultimate consumer, may be computed as follows :

$$C = C_F + C_{m1} + C_{m2} + C_{m3} + \dots + C_{mn}$$

where

$C$  = Total cost of marketing of the commodity,

$C_F$  = Cost paid by the producer from the time the produce leaves the farm till he sells it, and

$C_{mi}$  = Cost incurred by the *i*th middleman in the process of buying and selling the product.

Some of the costs are linked with the quantity marketed and some are linked with the value of the commodity. The former is a fixed charge, while latter is a variable one. The actual rates of charges are converted in terms of the weight unit or Rs. 100 worth of produce sold. The *ad valorem* charges are

rupee has varied with the marketing channel adopted by the farmers. The DMI studies reveal (Table 9.9) that the costs were higher when farmers adopted private channels in marketing of surplus produce compared to the institutional channels and hence farmer's share was lower when they sell through private channels.

A recent comprehensive analysis of statutory charges/taxes and transport and storage costs of wheat by Ramesh Chand<sup>29</sup> has shown that the mark up over farm harvest price prevailing during post-harvest season in a surplus state (like Punjab) needed to attract private sector in wheat trade is 74 percent to 126 percent (Goa) for the month of next March. This implies that for wheat supplied to a consumer in Goa in the month of next March, the share of a Punjab wheat grower (based on the price received in the preceding harvest month of May) in the consumer's price is 44.2 percent. This also means that the statutory charges and marketing costs (storing wheat from May to next March and transportation from Punjab to Goa included) add up to 55.8 percent of the consumer's price.

Sale of fruits through pre-harvest contractors is also common in fruit producing areas. The studies on estimates of marketing costs and margins reveal that farmers receive a lower price when they sell through the contractor. (See Table 9.4).

The gross marketing margins in marketing of agricultural products have also been worked out from National Accounts Statistics by Acharya, S.S. (1998). In this approach, difference between the total consumers expenditure on a particular farm product and the value of the output at the farm level has been used to estimate gross marketing margin. Based on an aggregate accounting, the gross marketing margin (GMM) as percentage of consumer's price is 19.2 in cereals, 7.2 in oilseeds, 32.9 in fruits and vegetables, 6.7 in milk and milk products, and 37.2 in sugarcane with an overall average of 19.3 percent for all agricultural commodities. The estimates are shown in Table 9.10.

**Table 9.10**  
**Gross Marketing Margins for Major Agricultural Commodities in India**  
**Using Aggregate Accounting Approach Based on data for 1986-87.**

(Percentages)

Crop Groups/Crops	Gross Marketing Margin
Cereals	19.2
Oilseeds	7.2
Fruits & Vegetables	32.9
Milk and Milk Products	6.7
Sugarcane/Sugar/Gur	37.2
Overall	19.3

Source: Acharya, S.S., Agricultural Marketing in India: Some Facts and Emerging Issues, Indian Journal of Agricultural Economics, 53(3), July-September 1998, pp. 311-32.

### FACTORS AFFECTING THE COST OF MARKETING

Studies on the cost of marketing reveal that there is a large variation in the cost per quintal or per Rs. 100 worth of the produce. The factors which affect marketing costs are:

(i) *Perishability of the Product*: The cost of marketing is directly related to the degree of perishability. The higher the perishability, the greater the cost of marketing, and vice versa.

(ii) *Extent of Loss in Storage and Transportation*: If the loss in the quality and quantity of product, arising out of wastage or spoilage or shrinkage during the period of storage or in the course of transportation is substantial, the marketing cost will go up.

(iii) *Volume of the Product Handled*: The larger the volume of business or turnover of a product, the less will be the per unit cost of marketing.

(iv) *Regularity in the Supply of the Product*: If the supply of the product is regular throughout the year, the cost of marketing on per unit basis will be less than in a situation of irregular supply or supply restricted to a few months of the year.

(v) *Extent of Packaging*: The cost of marketing is higher for the commodities requiring packaging.

(vi) *Extent of Adoption of Grading*: The cost of marketing of ungraded product is higher than that of the products in which grading can be easily adopted.

(vii) *Necessity of Demand Creation*: If substantial advertisement is needed to create the demand of prospective buyers, the total cost of marketing will be high.

(viii) *Bulkiness of the Product*: The marketing cost of bulky products is higher than that of which are not bulky.

(ix) *Need for Retailing*: The greater the need for the retailing of a product, the higher the total cost of marketing;

(x) *Necessity of Storage*: The cost of the storage of a product adds to the cost of marketing, whereas the commodities which are produced and sold immediately without any storage attract lower marketing cost.

(xi) *Extent of Risk*: The greater the risk involved in the business for a product (due to either the failure of the business, price fluctuations, monopsony of the buyer or the prevalence of unfair practices), the higher is the cost of marketing.

(xii) *Facilities Extended by the Dealers to the Consumers*: The greater the facilities extended by the dealer to the consumer (such as return facility for the product, home delivery facility, the facility of supply of goods on credit, the facility of offering entertainment to buyers, etc.), the higher the cost of marketing.

### REASONS FOR HIGHER MARKETING COSTS OF AGRICULTURAL COMMODITIES

Generally, the cost of marketing of agricultural commodities is higher than that of manufactured products. The factors responsible for this phenomenon are:

(i) *Widely Dispersed Farms and Small Output per Farm*: There are innumerable producers of agricultural products, each producing a small quantity. Producers are widely dispersed. Hence the cost of assembling is high.

(ii) *Bulkiness of Agricultural Products*: Most farm products are bulky in relation to their value. This results in a higher cost of transportation.

(iii) *Difficult Grading*: Grading is relatively difficult for agricultural products. Each lot has to be personally inspected during purchase and sale—a fact which increases marketing costs. The sale or purchase by contract or sample is not easy because an inspection of each lot of the product is required by reason of variation in their quality.

(iv) *Irregular Supply*: Agricultural products are characterised by seasonal production. Their market supply, therefore, fluctuates during the year. In times of glut, prices go down and the cost of marketing functions, on value basis, goes up.

(v) *Need for Storage and Processing*: There is a greater need for the storage of agricultural products because of the seasonality of their production. The processing of agricultural products is a necessity because all the agricultural products are not consumed in the raw form. Storage and processing add to the cost of marketing. Losses of agricultural products in storage are also high because of their perishability.

(vi) *Large Number of Middlemen*: In foodgrain marketing, the number of middlemen is larger because there is no restriction on their entry in the trade. Contrarily, there are many restrictions on the entry into the trade of industrial products. For example, the cumbersome licensing procedure, high risk and high capital requirement make entry into trade in non-farm goods somewhat difficult. The larger the number of middlemen, the higher the marketing costs.

(vii) *Risk Involved*: The risk of price fluctuations is higher in agricultural products. The higher risk leads to higher risk premium, which adds to the marketing cost.

### MARKETING COST IN INDIA AND OTHER COUNTRIES

In India, the marketing cost of foodgrains is lower than in developed countries. The farmer's share in the price paid by the consumer is higher in India than in developed countries. The factors responsible for this difference are:

(i) Foodgrains are sold in a relatively unprocessed form in India, whereas in developed countries, consumers want them mostly, in a processed form. In India, the processing of foodgrains is undertaken at the consumers' level. Therefore, the cost of marketing is lower, and the farmers' share in consumer's rupee is higher in India.



(ii) Human labour is relatively cheap in India, a fact which keeps the labour component of the marketing cost lower in India than in the developed countries.

### **MARKETING COSTS OF FOODGRAINS OVER TIME**

Over time, there has been an increase in the marketing cost of foodgrains in India. Some of the factors which have been responsible for this increase are:

(i) *Shifting Tendency from Subsistence to Commercialised Farming*: Previously, each farmer used to produce foodgrains needed by him; but now, because of specialization in agricultural production and increasing urbanization, the distance between producers and consumers has increased. The cost of moving foodgrains from producers to consumers has, therefore, increased.

(ii) *Technological Advances in Preservation and Storage*: Formerly, many food products were consumed only during the season of production. Specialization in production and the evolution of short duration high-yielding varieties have resulted in large-scale production, thereby necessitating their storage. Technological advances in storage and preservation, though have facilitated handling of large volumes but have increased the costs and widened the spread between the producers' and the consumer's prices.

(iii) *Change in the Form of Consumer Demand*: There has been a change in the consumers' behaviour over time. Consumers now like the product in a processed and ready-to-use form following the increasing impact of urbanization. The desire for attractive packaging and home delivery system, too, has had its influence on consumer demand. Their demand for marketing service has, therefore, increased.

### **HOW TO REDUCE MARKETING COSTS**

There are various ways of reducing marketing costs. No single factor can bring about any perceptible reduction in these costs. However, a combination of factors may bring about a significant reduction in the cost of marketing. Some ways of reducing marketing costs for farm products are:

#### **(i) Increase the Efficiency of Marketing**

An increase in the efficiency of marketing can be brought about by a wide range of activities between producers and consumers. Some major areas in which improved efficiency may result in a reduction in marketing costs are:

(a) *Increasing the Volume of Business*: By increasing the quantity to be handled at a time, one can effectively reduce marketing costs and increase marketing efficiency.

(b) *Improved Handling Methods*: The new methods of handling, such as pre-packaging of perishable products, the use of fast transportation means, the development of cold storages and an efficient use of labour are some of the methods by which efficiency may be increased and costs reduced.

If the absolute gross marketing margin remains the same, *i.e.*, Rs. 50 per unit, the farmer's price falls to Rs. 40 per unit, *i.e.*, a fall of 20 percent. In other words, 10 percent fall in the retail price results in a 20 percent fall in the farmer's price. This has been shown in Table 9.11.

Another point that emerges from Table 9.11 is that, in period  $t_1$ , the price received by the farmer was 50 percent of the price paid by the consumer but that in period  $t_2$ , the farmer received only 44.4 percent of the price paid by the consumer. To the extent that marketing margins or costs are sticky, the farmers lose more when the retail price decreases.

**Table 9.11**  
**Effect of Change in Retail Price on Farmer's Share**

Particulars	Period		Absolute change (Rs.)	Percentage change
	$t_1$ (Rs.)	$t_2$ (Rs.)		
Retail price	100	90	10	10
Marketing margin (gross)	50	50	—	—
Farmer's price	50	40	10	20

#### COMPUTATION OF PRICE-SPREAD-ILLUSTRATIONS

An efficient marketing system is a prerequisite for sustaining the tempo of increased agricultural production. This ensures fair returns to the farmers for their efforts. The economic efficiency of the marketing system is generally measured in terms of the price-spread of an agricultural commodity. The smaller the price-spread, the greater the efficiency of the marketing system. This price-spread, besides being influenced by such marketing inputs as storage and transportation, changes with the shifts in the demand for, and/or in the supply, of the product.

The term *price-spread* has been variously defined and understood according to its usage. Generally, it refers to the difference between the two prices, *i.e.*, the price paid by the consumer and the price received by the producer. A study of the price-spread involves not only the ascertainment of the actual prices at various stages of the marketing channel, but also the costs incurred in the process of the movement of the produce from the farm to the consumer and the margin of various intermediaries.

The following illustrations show the method of calculating the price-spread in foodgrain marketing:

##### Case I

A farmer, Mr. Bhura (B) comes to Krishi Upaj Mandi, Dausa (regulated market) with 100 bags of wheat (each weighing 100 kg net). He takes the

produce to M/s. Jain Brothers (J), a commission agent. Immediately on arrival, Mr. Bhura requests M/s. Jain Brothers to make payment on his behalf to the truck-owner for transporting the produce and for octroi charges. The produce is unloaded from the truck by licensed labourers, who are paid by the commission agent on behalf of the farmer. The produce is put on the auction platform, and the farmer takes his empty gunny bags. The rates of payments made so far by the commission agent, on behalf of the farmer, are:

- (i) Transportation charges @ Re. 0.50 per bag
- (ii) Octroi @ Re. 0.25, per bag
- (iii) Labour for unloading @ Re. 0.25 per bag

Now the produce is auctioned and one wholesaler, M/s. Mool Chand Sagar Mal, purchases this lot at a price of Rs. 460.00 per quintal. The commission agent makes the payment to the farmer at the rate of Rs. 460 per quintal after the deductions shown in (i), (ii) and (iii) above, which are to be borne by the farmer. The farmer returns home.

Meanwhile, the wholesaler, M/s. Mool Chand Sagar Mal, has decided to send this lot to Jaipur market in a hired truck. This wholesaler pays for following items in Dausa market:

- (iv) Cost of gunny bags @ Rs. 5.00 per bag
- (v) Labour charges for filling and stitching bags @ Re. 0.20 per bag
- (vi) Weighing @ 0.25% of the value of the produce
- (vii) Commission to the commission agent @ 1 % of the value of the produce
- (viii) Market fee to the market committee @ 1 % of the value of the produce
- (ix) Labour charges for loading the bags into the truck @ Re. 0.25 per bag
- (x) Truck transport charges @ Rs. 1.50 per bag (Dausa to Jaipur)

After arriving in Jaipur market, the wholesaler, M/s. Mool Chand Sagar Mal, pays for the following items:

- (xi) Labour charges for unloading, @ Re. 0.25 per bag
- (xii) Octroi @ Re. 0.25 per bag

The unloading in Jaipur is done at the shop of a commission agent; through him, this lot is sold to M/s. Daulat Chand & Co. @ Rs. 485 per quintal. The empty gunny bags are also sold @ Rs. 4.00 per bag. The commission agent collects the following amounts from the buyer (*i.e.*, M/s. Daulat Chand & Co):

- (xiii) Commission @ 1 % of the value of the produce
- (xiv) Market fee (to be paid to the market committee, Jaipur) @ 1 % of the value of the produce
- (xv) Weighing charges @ 0.40% of the value of the produce

M/s. Daulat Chand & Co. take the produce to his shop and, while doing this, he incurs the following expenses:

- (xvi) Labour charges for @ Re. 0.50 per bag  
transporting the produce  
to his shop

Now M/s. Daulat Chand & Co. sells wheat to consumers @ Rs. 515 per quintal, together with the gunny bags, for which an extra charge of Rs. 3.00 per bag is realised.

It has been assumed that there is no physical loss during the handling of the produce and that no significant time elapses between various transactions.

Given this information, the marketing costs, the marketing margins and the price-spread in the marketing of wheat may be worked out as follows:

### **Marketing Costs**

#### **(a) Incurred by the Farmer, Mr. Bhura**

Particulars	Quantity (bags)	Rate (Rs./bag)	Amount (Rs.)
(i) Transport charges	100	0.50	50.00
(ii) Octroi	100	0.25	25.00
(iii) Labour charges for unloading	100	0.25	25.00
Sub Total (a)			100.00

#### **(b) Incurred by the Wholesaler, M/s. Mool Chand Sagar Mal of Dausa Market**

Particulars	Quantity	Rate (Rs.)	Amount (Rs.)
(iv) Cost of gunny bags (Rs. 5 - 4) (his purchase price minus sale price)	100 bags	1.00 per bag	100.00
(v) Labour charges for filling and stitching of bags	100 bags	0.20 per bag	20.00
(vi) Weighing charges	Rs. 46,000 worth of produce	0.25% of the value	115.00
(vii) Commission	"	1 % of the value	460.00
(viii) Market fee	"	1 % of the value	460.00
(ix) Labour charges for loading on to truck	100 bags	0.25 /per bag	25.00
(x) Truck transportation from Dausa to Jaipur	100 bags	1.50/per bag	150.00
(xi) Octroi at Jaipur	100 bags	0.25/ per bag	25.00
(xii) Labour charges for unloading from the truck at Jaipur	100 bags	0.20/per bag	20.00
Sub Total (b)			1375.00

**(c). Incurred by M/s. Daulat Chand and Co. of Jaipur**

Particulars	Quantity	Rate (Rs.)	Amount (Rs.)
(xiii) Cost of gunny bags (Rs. 4 - 3)	100 bags	1.00 per bag	100.00
(xiv) Commission on value of the produce	Rs. 48,500 worth of the produce	1% of the value	485.00
(xv) Market fee at Jaipur	"	1 % of the value	485.00
(xvi) Weighing charges	"	0.4% of the value	194.00
(xvii) Transport charges from market to his shop	100 bags	0.50/per bag	50.00
	Sub Total (c)		1314.00

Total marketing cost (a + b + c) = Rs. 2789.00

**Profits or Net Margins of Traders**

Profit of a trader = Receipts (sale value) minus purchase value minus cost incurred

$$A_{mi} = P_{Ri} - (P_{pi} + C_{mi})$$

Profit (net margin) of M/s. Mool Chand Sagar Mal of Dausa (in Rs.)  
 = Rs. (485 × 100) - (Rs. 460 × 100) - (Rs. 1375.00)  
 = 48,500 - 46,000 - 1375 = 1125

Profit or net margin of M/s. Daulat Chand & Co. of Jaipur (in Rs.)  
 = Rs. (515 × 100) - (Rs. 485 × 100) - (Rs. 1314)  
 = 51500 - 48500 - 1314 = Rs. 1686

Total margins for both traders = Rs. 1125 + Rs. 1686 = Rs. 2811

**Price Received by the Farmer**

Gross price received Rs. 460.00 per quintal

Cost borne by the farmer @ Re. 1.00 per quintal (Rs. 100 for 100 quintals).

Net price received ( $P_F$ ) =  $P_A - C_F$   
 = 460.00 - 1.00 = Rs. 459.00 per quintal

or

46,000 - 100 = Rs. 45,900 for 100 quintals.

**Price-Spread**

The price-spread is as follows:

Particulars	Gross for whole lot of 100 quintals (Rs.)	Per quintal (Rs.)	Percent share in the price paid by the consumer
Farmer's share or net receipt of the farmer	45,900	459.00	89.12
Marketing Cost	2,789	27.89	5.42
Marketing margins—(total for both traders) net profit retained by them after meeting their costs	2,811	28.11	5.45
Price paid by the consumer	51,500	515.00	100.00

**Case II**

A farmer Mr. Ramu, comes to Krishi Upaj Mandi Samiti, Madanganj, with 750 bags of wheat, each weighing 100 kg net. He takes the produce to M/s. Mehta Brothers—a commission agent. Mr. Ramu requests his commission agent to make the following payments on his behalf:

- (i) To truck-owner for transporting the wheat @ Re. 0.50 per bag
- (ii) Octroi charges @ Re. 0.25 per bag
- (iii) To labourers for unloading the produce from the trucks @ Re. 0.20 per bag

Now the produce is auctioned and a wholesaler, M/s. Phool Chand Ganga Ram, purchases the produce at a price of Rs. 450.00 per quintal. The commission agent makes the payment to the farmer after deducting the expenses on items (i), (ii) and (iii) above. The wholesaler incurs the following expenses in the purchase of wheat at Madanganj market:

- (iv) Cost of the gunny bags @ Rs. 5.00 per bag
- (v) Sales tax @ 2% of the value of produce
- (vi) Labour charges for filling and stitching of bags @ Re. 0.40 per bag
- (vii) Commission @ 1 % of the value of the produce
- (viii) Market fee to the market committee @ 1 % of the value of the produce
- (ix) Weighing @ 0.3% of the value of the produce

The wholesaler decides to transport this wheat to the secondary wholesale market at Jaipur by rail and incurs the following expenses;

- (x) Cartage to station at Madanganj @ Re. 0.50 per bag
- (xi) Railway freight (for the whole lot) @ Rs. 200.00
- (xii) Octroi at Jaipur @ Re. 0.25 per bag
- (xiii) Loading and unloading charges @ Re. 0.25 per bag
- (xiv) Cartage at Jaipur @ Re. 0.30 per bag

The wheat of the wholesaler, M/s. Phool Chand Ganga Ram, is sold to a retailer, M/s. Padam & Co. of Jaipur, through his commission agent @ Rs. 480.00 per quintal. The empty gunny bags are purchased by the retailer @ Rs. 4.00 per bag. The commission agent collects the following amounts from the buyer (M/s. Padam & Co.);

- (xv) Commission @ 1.25% of the value of the produce
- (xvi) Labour charges for unloading @ Re. 0.20 per bag
- (xvii) Weighing charges @ 0.30% of the value of the produce
- (xviii) Market fee @ 1% of the value of the produce

M/s. Padam & Co. takes the produce to his shop in his own truck and sells it to consumers @ Rs. 500 per quintal. The empty bags are disposed of

by him @ Rs. 3.00 per bag in the market. For the sake of simplicity, it has been assumed that there is no loss in transit and no significant time lag.

Given this information—producer's price, producers' share in consumers' rupee, absolute margin of the wholesaler and retailer; and marketing costs incurred by producer, wholesaler and retailer; and price spread can be worked out as follows:

### Marketing Costs

(a) Cost incurred by the farmer (since the farmer had no money, commission agent paid these and deducted them from the payment made to the farmer)

S.No.	Particulars	Quantity	Rate (Rs.)	Amount (Rs.)
(i)	Transportation cost	750 bags	0.50/bag	375.00
(ii)	Octroi	750 bags	0.25/bag	187.50
(iii)	Labour charges	750 bags	0.20/bag	150.00
		Sub Total (a)		712.50

(b) Cost incurred by the wholesaler, M/s. Phool Chand Ganga Ram, at Madanganj and Jaipur markets.

S.No.	Particulars	Quantity/value	Rate (Rs.)	Amount (Rs.)
(iv)	Cost of gunny bags (purchase price minus sale price)	750 bags	1.00/bag	750.00
(v)	Sales tax on value	Rs. 3,37,500 (750 X 450)	2% of the value	6,750.00
(vi)	Labour charges for filling and stitching of bags	750 bags	0.40/bag	300.00
(vii)	Commission	Rs.3,37,500	1 % of the value	3,375.00
(viii)	Market fee	"	1 % of the value	3,375.00
(ix)	Weighing charges	Rs. 3,37,500	0.3% "	1,012.50
(x)	Cartage at Madanganj	750 bags	0.50/bag	375.00
(xi)	Railway freight (total)	750 bags	—	200.00
(xii)	Octroi at Jaipur	750 bags	0.25/bag	187.50
(xiii)	Loading and unloading charges at Jaipur	750 bags	0.25/bag	187.50
(xiv)	Cartage at Jaipur	750 bags	0.30/bag	225.00
		Sub Total (b)		16,737.50

## (c) Cost incurred by the retailer, M/s. Padam &amp; Co.

S.No.	Particulars	Quantity/value	Rate (Rs.)	Amount (Rs.)
(xv)	Commission	Rs. 3,60,000 (750 x 480 = 3,60,000) value	1.25% of	4,500.00
(xvi)	Market fee	"	1 % "	3,600.00
(xvii)	Weighing charges	"	0.30% "	1,080.00
(xviii)	Labour charges	750 bags	0.20/bag	150.00
(xix)	Cost of gunny bags (purchase price minus sale price)	750 bags	1.00/bag	750.00
		Sub Total (c)		10,080.00

Total marketing costs (a + b + c) = Rs. 27,530.00

**Marketing Margins**

(a) Margin of wholesaler (M/s. Phool Chand Ganga Ram)

$$\begin{aligned}
 &= P_{Ri} - (P_{pi} + C_{mi}) \\
 &= (750 \times 480) - (750 \times 450) - 16737.50 \\
 &= \text{Rs. } 5,762.50
 \end{aligned}$$

(b) Margin of retailer (M/s. Padam & Co.)

$$\begin{aligned}
 &= P_{ri} - (P_{pi} + C_{mi}) \\
 &= (750 \times 500) - (750 \times 480) - 10080.00 \\
 &= \text{Rs. } 4,920.00
 \end{aligned}$$

**Producer's Price**

$$\begin{aligned}
 P_A &= P_F - C_F \\
 &= (750 \times 450) - 712.50 \\
 &= \text{Rs. } 336787.50 \text{ for 750 quintals.} \\
 &= \text{Rs. } 449.05 \text{ per quintal.}
 \end{aligned}$$

**Producer's Share in Consumer's Rupee**

$$\begin{aligned}
 P_S &= (P_F \div P_R) 100 \\
 &= (449.05 \div 500) 100 = 89.81 \text{ percent.}
 \end{aligned}$$



**Price-Spread**

The price-spread in this case is as follows:

Particulars	Gross for whole lot of 750 quintals (Rs.)	Per quintal (Rs.)	Percent share in the price paid by the consumer
Farmer's share	336,787.50	449.05	89.81
Marketing costs	27,530.00	36.71	7.34
Marketing margins of both the traders	10,682.50	14.24	2.85
Price paid by the consumers	375,000.00	500.00	100.00

**LIMITATIONS OF PRICE-SPREAD STUDIES**

Price-spread studies conducted both at micro and macro level present enormous difficulties and hence results are not comparable both overtime and space. Some of the difficulties are:

(i) There is considerable regional variation in prices of commodities. Further, the varieties grown and marketed in different regions are not comparable.

(ii) Prices of commodities are not correlated to the recognized quality standards and, therefore, not comparable.

(iii) The number of intermediaries between the producer and the ultimate consumer or the length of the marketing channel varies from area to area.

(iv) The authentic data of prices paid by various intermediaries during a period of time are not available. Generally intermediaries do not maintain the accounts. Even if they maintain, access of researchers to such records is impossible.

(v) There are divergent methods of handling and transportation followed in different regions which results in large variation in marketing costs, margins and price-spread across commodities and regions.

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# Training, Research, Extension and Statistics in Agricultural Marketing

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A decision on appropriate strategy, the evolution of proper policy and a choice of policy instruments require a continual flow of advice, information and assessment of the existing marketing system from all those who are engaged and involved in this activity, directly or indirectly. Every system generates impulses as a result of environmental changes, including policy. These impulses have to be observed, recorded, analyzed and interpreted for the decision and policy making. This task is performed usually by administrators and field staff who man the various marketing institutions, scientists and economists, organizations representing farmers, traders and consumers, and the like. The extent to which these persons are able to help in the formulation of better policies depends largely on the training and research network and statistical information system available in a country. This chapter deals with training, research facilities, extension, and statistical organisation as they relate to agricultural marketing, with special reference to the Indian situation.

## TRAINING IN AGRICULTURAL MARKETING

Training is an essential adjunct of human resource development. It helps in bridging the gap in knowledge and skills. In addition, training enables the stakeholders to change their attitudes.

The training in agricultural marketing has received attention both at the national and international levels. The Food and Agricultural Organisation's workshop on the Improvement of Agricultural Marketing Training in Asia, held in Thailand in April, 1979, is indicative of international concern in this regard. This workshop was preceded by regional surveys and followed by regional seminars.

Training in agricultural marketing should aim at equipping those who perform various marketing functions with development-oriented perception, practical knowledge, analytical ability and managerial and risk-taking capabilities. Broadly seven target groups can be identified for training in agricultural mar-

keting, viz., producers, consumers, market functionaries, staff of market committees, chairmen and members of market committees, development policy-makers and programme-planners.

These stakeholders interact at different levels and at different stages and influence the performance of agricultural marketing system.

For understanding the existing status of training and identifying the training needs, at least three levels of training in agricultural marketing may be identified:

- (i) University or College Level Training
- (ii) On-the-Job Training
- (iii) Other Training

#### **UNIVERSITY OR COLLEGE LEVEL TRAINING**

There is a wide variation in agricultural marketing training programmes among the universities in Asia. The courses and their contents vary from institution to institution. Basically, four patterns may be observed.

(i) Till recently agricultural universities and colleges offered a general course in agricultural development for all the graduates at the first degree level. This course partly covered agricultural marketing well. In addition, there were a number of elective courses. Students who opted for agricultural economics as their elective subject were offered a course of three semester credits in agricultural marketing.

Now, agricultural universities and colleges, under the changed common pattern of I.C.A.R., offer a general course in agricultural marketing for all the students at the first degree level in addition to other courses in agricultural economics discipline viz., farm management, economics and agricultural finance and management. The course on agricultural marketing is of three semester credits.

(ii) At the post-graduate level, one course of three semester credits in agricultural marketing and another course of an equal number of credits in agricultural price analysis are invariably offered to all those who desire to take an M.Sc. Ag. degree in agricultural economics. Some universities offer a specialization course in agricultural marketing. The tendency among M.Sc. students of other disciplines to take agricultural marketing and related courses in agricultural economics as their minor fields is increasing. At the Ph.D. level, these courses are offered at a very advanced level.

Barring a few exceptions, those specializing in agricultural marketing are not placed in related jobs after their education, mainly because of lack of proper manpower planning.

(iii) Many universities in Asia have separate departments of marketing which are a part of the Faculty of Commerce. These departments, however, do not offer specific courses in agricultural marketing. In the Faculty of