REVIEW
OF
LITERATURE
CHAPTER II

REVIEW OF LITERATURE

A review of past research helps in identifying the conceptual and methodological issues relevant to the study. This would enable the researcher to collect accurate data and information and subject them to sound reasoning and meaningful interpretation. This chapter attempts a brief review of the relevant research literature that has accumulated on the areas related to the present study.

2.1 Relationship between price and quality characteristics

Naik and Babu (1993) in the book “Demand and Supply Prospects for High Quality Raw Silk”, while discussing about the quality of raw silk suitable for export stated that, the number of characters of raw silk affecting the quality of raw silk have been identified, they are visual characters such as appearance, evenness and neatness, size deviation, winding breaks, tenacity and elongation, cohesion and conditioned weight.
**Naik (1995)** in his study “Price-Quality Relationships in Raw Silk Markets” examined the extent to which the price reflects the quality of silk. This was done by regressing the prices at which the lots are transacted in Bangalore silk exchange on their levels of quality characteristics. The results indicated that the only 76 per cent of the variations in price is explained by the quality characteristics for both charka and cottage basin silk suggesting a poor linkage between quality and price. The study suggested that grading silk before transaction and establishing forward contract would encourage reelers to produce better quality silk.

**Thomas (1996)** studied the contribution of quality attributes to the value of silk yarn. Hedonic price model has been built to relate the raw silk price to the levels of its various quality characteristics. Also, the quality attributes of silk yarn together with prices were subjected to factor analysis to study the dimensions of quality.

**Venugopal (1996)** studied the dependence of renditta on five cocoon quality parameters viz., waste percentage on silk weight, defective cocoon percent, non-broken filament
length, shell ratio percent and filament denier was studied. Stepwise regression analysis was carried out and it was observed that 71 per cent of the variations in renditta could be explained by these five independent variables.

Rahmathulla, et al. (2003) studied the impact of quality characteristics of mulberry cocoons on the price of cocoons. The estimated regression had coefficient of determination ($R^2$) value of 0.6110, which revealed that 61.10 per cent of total variation in the cocoon prices could be expressed by the quality attributes considered for the study. The standardized regression coefficients revealed that the percentage defective cocoon and raw silk were the strongest determinants of the price with coefficients of -0.4141 and 0.4333, respectively.

2.2 Product Form and Price Integration of Markets

Govardhan (1978) analysed the seasonal variation in prices and arrivals of dry chillies in Karnataka. The study indicated that 70 to 80 per cent of the total produce arrived at the market between November and April. In this period, the prices were at a relatively lower level.
Satish (1980) analysed temporal and spatial variations in prices and arrivals of Jowar by using multiplicative model of time series. The study indicated a strong seasonality of arrivals in respect of Jowar. The seasonal variations of prices showed that the seasonal pattern has changed over the years.

Gupta and Mueller (1982) while analysing the pricing efficiency in spatial markets suggested a technique for analysing the price relationships between regional markets which avoids the ambiguity of the correlation coefficient. The method is based on Fama's concept of pricing efficiency and consists of tests included under the heading Granger causality. The resources are optimally allocated when no extra normal profits are made by the transactors in the market. Emergence of monopoly profits leads to a sub-optimal allocation and usage of resources. Monopoly profits could appear if imperfect arbitrage exists for a given commodity which is traded between markets. Transactors could make excess profits by buying in a cheaper market and selling in a relatively expensive market. This type of profit making opportunity is generally
available where one market leads or lags behind the other market(s). Absence of a lead lag relationship implies that the markets are spatially price efficient.

**Achoth (1985)** undertook an in depth analysis of supply, trade and prices of Indian tea. Spatial analysis was used to decompose the series into its cyclic components and to study the inherent variation in the price and quantity series at the four tea auction centres. The results of the study indicate that at the calculate auctions, the quantity cycles in the leaf prices were seen in the corresponding series of quantity sold also.

**Rao (1986)** studied the marketing efficiency of cocoon markets of Karnataka and highlighted the importance of cocoon markets for the development of sericulture industry in the state. The study revealed that the existence of price efficiency and spatial integration of cocoon markets.

**Nagaraj et al. (1987)** studied the spatial integration and price leadership and forecasting silk cocoon prices for major/minor markets of Karnataka. Monthly data on
prices of 14 markets pertained to the period January 1980-81 to December 1985-86 was taken and the same were fitted using ARIMA models. Spatially interrelated markets are price efficient and hence desirable from the point of view of the cocoons produced. It is widely believed that Ramnagaram is the leading market for silk cocoons in Karnataka, probably in the region, since cocoons from Andhra Pradesh and Tamil Nadu are also marketed here. The results however, revealed that the markets were spatially integrated and thereby price efficient and the prices were not formed based on the leadership of Ramnagaram market price.

Nataraja (1987) studied month wise quantum transaction and the average price of charka raw silk and filature/cottage basin raw silk at Bangalore Silk Exchange from January 1982 to March 1987. The data were subjected to time series analysis by using three monthly moving average seasonal indices. The study revealed that simple correlation coefficient between two indices was found to be negative and significant. It was - 0.66 for charka raw silk and - 0.65 for filature/cottage basin raw
silk. The study further concluded that lower quantum transaction in the month would result in higher average price in that month.

Prabhakar (1988) studied trend and seasonal variation in prices and arrivals of silk cocoons in the major cocoon markets of Karnataka and found a significant increasing trend for both arrivals and prices. The peak in arrivals was observed in the month of July, which reappeared in November and finally reached the highest level during the month of March. These patterns were indicated by the seasonal effects on production. It was that the degree of seasonal variation in prices was substantially less than in the arrivals. The seasonal index was lowest in May in the case of arrivals and in the month of November in the case of prices. The study reported that the trough and peak did not coincide and indicated the impact of climate and season on sericulture output was not as great as in many other agricultural commodities as the cocoon prices, connected with prices in the silk yarn market. Further it was concluded that 6 month cyclic cocoon arrivals lead the price cycles.
Arun Kumar (1990) while analysing the pricing efficiency of cardamom (through time series analysis) in Kerala state, indicated that the three major cardamom markets, viz., Saberpum, Vandan Medu and Partiveeranparti were interdependent and there was a free flow of information among the markets indicating a high degree of exchange of information. It could be observed that there existed a certain degree of bi-directional causality implying that there was a two way relationship between markets.

Zapata and Garcia (1990) evaluated the forecasting performance of various multivariate as well as univariate Auto Regression Integrated Moving Average (ARIMA) models in the presence of non-stationarity. Specifically, the accuracy of these approaches for forecasting monthly US prices of slaughter steers is examined. The results indicate the importance of identifying the characteristics of the time series by testing types of non-stationarity. The study concluded that the procedures that permit model specifications consistent with the system's dynamics provide the most accurate forecasts.
**Kerutagi (1991)** studied the marketing of silk cocoons in Bijapur district of Karnataka and the study indicated that major markets offer un-remunerative prices because of less competition and good understanding among the reelers. Following the Box-Pierce procedure for testing for Granger causality, the price leadership of the Ramanagram market was studied. This test was performed on the price series of 14 markets, which were filtered using the ARIMA model. Price leadership is however undesirable since traders will be able to profit by arbitrage.

**Nijaguna (1992)** while studying the seasonality in arrivals of silk in Karnataka has stated that filature silk arrivals reached a peak during January and March. In case of charka and dupion silk arrivals, no definite pattern was observed and arrivals were fluctuating. However, the arrivals of charka silk were highest in the month of October and that of dupion silk during January and March. Further he studied the degree of association between the arrivals and prices by correlating the first difference of the respective price series with that of the corresponding arrivals. He observed that the coefficients
for filature and charka silks were non significant but the arrivals and prices of dupion silk were significantly correlated. He also observed a positive correlation between silk cocoon price and silk yarn price.

**Naik and Babu (1993)** have analysed the demand and supply prospects for high quality raw silk in India. The supply of and demand for quality raw silk have been estimated by using micro-economic models. Certain estimates have been used where ever data was not available. They have estimated that the total high quality silk production could meet at the most 60 percent of the estimated demand. They have proposed certain policy options into demand related and supply related aspects. They cautioned about the negative implications the import of Chinese raw silk has on the development of Indian silk industry. The diversion of imported silk into domestic sector is benefiting only the consumers. By avoiding this diversion, the demand for domestically produced high quality silk would have increased for the good health of the industry.

**Arun Kumar et al. (1996)** analysed the monthly price series from January 1986 to March 1991 of filature,
charka and dupion silk prices and Ramnagaram cocoon prices to study the extent of integration between silk yarn and cocoon prices. The series were examined first for stationarity by computing the Auto Correlation Function (ACF) for all the series. The linear decline in the ACF indicated the presence of a trend and hence non-stationarity. The series became stationarity on differencing and hence these series were used to compute the cross correlation function. An examination of the auto-correlation function revealed a high degree of interdependence between silk yarn and silk cocoon prices. But what was interesting was a lagged response of dupion and charka prices to change in cocoon prices after a period of 2-3 months. However, there was evidence to show that filature prices immediately responded to the change in cocoon price indicated by correlation coefficient of 0.529 at lag (0) of the auto-correlation function.

Naik (1996) in his paper on “Domestic and International Silk Markets and Prices: A Policy Framework” concludes that in the international market, demand enhancing measures have to be taken to keep pace with the
increasing supply of raw silk. Collective action of the silk producing and processing countries was called for. Generic promotion of silk, market research to understand the needs of the consumers, research for technological development, quality control, new product development and promotion were some of the measures suggested.

Thomas (1996) determined the extent of integration of cocoon and silk yarn markets. The Bangalore silk exchange and Ramnagaram cocoon market which are the biggest markets of silk yarn and cocoons in India were studied with a view to determine the efficiency of prices and cointegration of the markets for these products. Auto Regressive Integrated Moving Average (ARIMA) technique has been used for the purpose. Spatial integration and product form integration have been studied. The results suggested that the prices of cocoon and silk yarn were interdependent. The study also showed that, though Karnataka Silk Marketing Board operations have had an impact on the silk yarn prices, they have tended to become less effective over the years. It was observed that in the case of silk yarn transactions, disequilibrium, in general,
occurs when weavers try to wield market power by trying to reduce prices. The changing demand patterns for silk goods both in the export and domestic sectors can influence the production processes through the relatively efficient cocoon and silk markets. The thesis has contributed to the understanding of the various dimensions of operations of Indian silk industry from aspects of marketing of cocoons and raw silk to exports.

**Federico (1997)** studied the prices of dried cocoons, raw and thrown silk in the Milan market and observed that they moved very closely together (the correlation coefficients between monthly prices were in excess of 0.95 between 1894 and 1913), because a multitude of people buy and sell cocoons and silks only to earn the price differentials. The world market also was highly integrated. The correlation coefficient between monthly prices in Lyons, Milan and New York was about 0.90 – 0.95. Most price differentials were arbitraged away within a month’s time and all within two months. The study has revealed that, approximately a third of the innovations of the price series (proxied by the white-noise residuals of the ARMA
series) were common to the three markets. They could reflect the common reaction to the same pieces of information, which caused prices to move in the same direction and made arbitrage unnecessary. The study concluded that the silk market was highly integrated.

Vasumathi, B.V (2000) in her doctoral thesis “An Analytical Study of the Silk Reeling Operations in Karnataka” reported that ARIMA analyses have facilitated a clearer understanding of the cocoon market dynamics. It is revealed that, in the case of state average data, supply leads the cocoon price by one day. There is significant correlation at lag one between the two series. They show significant correlation at lag zero. The correlation between cocoon price and supply was found to be significant at lag zero in the case of Ramanagaram cocoon market. It is observed that around 75 per cent of the variations in cocoon price in the case of state average and around 84 per cent in the case of Ramanagaram cocoon market, are predicted by the model.
It was also reported that the cocoon price leads the raw silk price with a lag of 7 days. It would appear, raw silk market uses information from the cocoon market, while the cocoon market is not really reflecting the use of complementary information from the raw silk market. The lead-lag relationship between the prices of the two markets will be providing for profits through arbitrage. This affects pricing efficiency. Significant cross-correlations at non-zero lags indicate price leadership. The lack of instantaneous causality between cocoon price and raw silk price implies the existence of some barrier between the two price series. The yarn price and cocoon price at period \( (t-7) \) are significantly related. However, the lag got reduced to four days in the case of Ramanagaram market. The chain of dependence can thus be represented as:

Cocoon supply \( \rightarrow \) Cocoon Price \( \rightarrow \) Indigenous Raw silk price \( \rightarrow \) Chinese raw silk price.

### 2.3 Relationship between domestic and International Prices

While analysing the export growth and export prices of turmeric in India, Ravindran and Aiyasamy (1982) indicated that the cyclical pattern of variations in prices
when plotted on a graph revealed that the length of the export price cycle varied from three to seven years. The export prices were studied for their relation with the domestic prices. The coefficient of correlation was 0.9473 and this close movement of export and domestic prices of turmeric explained the poor variation in the value of the variable Rt (ratio of export price Pe to domestic price Pd in year t) and consequently the correlation of export price of turmeric with its domestic prices. This indicated that the latter was exposed to international trade fluctuations.

2.4 Competitiveness / Comparative Advantage

Anderson and Ahn (1984) examined the protection policy and changing comparative advantage of Korean agriculture from the mid 1960s. The domestic resource cost methodology was used to measure the foreign exchange earnings foregone by keeping resources in rice production. They concluded that agricultural protection is unlikely to continue to achieve its objective of slowing the decline in food self sufficiency and helping farmers keep pace with urban incomes unless it was increased continually.
Gulati (1987) attempted to quantify the degree of distortion in the trade and pricing policies with regard to Indian seed cotton during the 1980s. The region-specific and variety-specific structure on incentives for cotton was estimated by adopting a standard methodology covering four major varieties of cotton which dominate in the cultivating regions of Maharastra, Punjab, Gujarat and Andhra Pradesh. The results in general indicated a situation of disprotection for the Indian cotton cultivators and suggested that Indian cotton was an efficient export crop as well as an efficient import substitute.

Gulati et al. (1990) studied the effective incentives for wheat cultivators in India by selecting four wheat growing states (Haryana, Madhya Pradesh, Punjab and Uttar Pradesh) under importable hypothesis. The Nominal Protection Coefficients (NPCs) for four states averaged for the period 1980-81 through 1986-87 were found to be 0.84, 0.75, 0.85 and 0.77 in the case of Haryana, Madhya Pradesh, Punjab and Uttar Pradesh, respectively. These results indicated that wheat cultivators in India have been taxed on pricing front compared with imports. But under
export competition hypothesis only one state i.e., Punjab was taken indicating that cultivators in Punjab state were protected.

Gulati et al. (1990) worked out the protection coefficients for groundnut in India by selecting three different groundnut growing states under both import and export competition hypothesis. Domestic price of groundnut was about 50 per cent more than import price which implied that groundnuts received a significant degree of protection from the existing policies under import competition hypothesis. The Nominal Protection Coefficients (NPCs) of Gujarat, Andhra Pradesh and Tamil Nadu were 1.47, 1.50, 1.53 under import competition hypothesis and 1.87, 1.96 and 1.95 under export competition hypothesis respectively, indicating the level of incentives were significantly higher under export competition hypothesis than under import competition hypothesis and Indian exports of groundnuts to hard currency areas have been limited in the 1980s.

Ke (1993) introduced two kinds of trade protection coefficient and attempts to calculate the grain trade
protection coefficient in China. Nominal Protection Coefficient (NPC) and Effective Protection Coefficient (EPC) are two popular measures for trade protection. The results showed that, based on the official exchange rate, the coefficient decreased to the lowest level in 1985, then increased afterwards. The highest (1.4) was achieved in 1989. The results also show that the magnitude of the coefficient changes from year to year and from crop to crop. Effective protection is much lower because of the overestimated exchange rate for Chinese currency. Implications of the coefficients are discussed.

In the study involving estimation of nominal protection coefficients (NPCs) for DCH-32 seed cotton in Karnataka for the period 1983-84 through 1991-92 under both importable and exportable hypothesis, Umapathi et al. (1995) indicated an overall situation of disprotection to the cotton cultivators of the area studied. The NPCs were found to be much below unity and implied that DCH-32 seed cotton would be an efficient export crop as well as an efficient import substitute, but for the barriers that de-link the domestic market from the world market.
Arun Kumar et al. (1996) analysed the relationship between domestic raw silk price and imported raw silk price by computing the Nominal Protection Coefficient and Devalued Protection Coefficient. It was observed that the silk market price in India is protected even after devaluation. It was observed that only during 1971-72 and 1972-73, the Protection Coefficient was less than one and in the rest of the years it was more than one, it reached its peak (2.62) during 1987-88, but from 1988-89 it started decreasing. From 1989-90, Indian silk prices became more and more competitive, primarily due to devaluation of the exchange rate.

Ravi et al. (1998) examined the comparative advantages of selected agricultural commodities in domestic and international markets with particular reference to Karnataka. The export competitiveness of six important crops grown in the State namely jowar and maize as food crops, groundnut, sunflower and cotton as commercial crops and coffee as a plantation crop was examined using the Nominal Protection Coefficient (NPC) as a measure of competitiveness. The NPC explained the
comparative advantage enjoyed by the commodity in the context of free trade. Among the six commodities studied, Karnataka lacked comparative advantage in most of the crops except cotton.

Reddy et al. (1998) examined the deviation of the domestic market price for groundnuts from the world market price due to government regulation in Karnataka for the period 1984/85 - 1993/94. The terms of trade indicated that during this period groundnuts were neither an efficient import substitute nor an exportable commodity. The study suggested that efforts should be made to upgrade processing and storage to improve prospects on the world market.

Reddy et al. (1998) studied the export competitiveness of sunflower production using the nominal protection coefficient (NPC). Data on the domestic prices for sunflower sold in Karnataka were collected for the period 1984/85-1993/94 and compared to the FAO’s world prices for 1984-93. Results indicated that sunflower production was an efficient import substitute but that sunflower exports were less competitive on the world market.
Reddy et al. (1998) analysed the competitiveness of major dry land crops of India (sorghum, maize, groundnut and sunflower) using the Nominal Protection Coefficient (NPC). Price policies have allowed domestic prices to deviate from world market prices. The NPCs revealed that with the exception of groundnuts, all the crops were good import substitutes, although none have good export prospects currently. Groundnut had an NPC of greater than one, both under importable and exportable hypotheses.

Mahesh et al. (2001) analysed the export performance of the Indian tea industry under the new economic environment. Under importable hypothesis, the Nominal Protection Coefficient (NPC) and Domestic Resource Cost (DRC) were 0.71 and 0.66, respectively, and under exportable hypothesis, the NPC and DRC were 0.98 and 0.93, respectively, implying that Indian tea exports were moderately competitive and also good import substitute.
Bogale et al. (2002) examined the competitiveness of smallholder farmers in food crop production. Findings were drawn from data collected in three districts of Ethiopia, which represent various agro ecologies, socioeconomic and major farming systems, in the 1999/2000 cropping season. Partial budget analysis was carried out to determine both financial and economic profitability for major crops. Policy Analysis Matrix (PAM) indicators (e.g., nominal rate protection coefficient, effective rate of protection coefficient, and domestic resource cost ratio) were employed to examine the incentives generated under a set of existing agricultural policy and competitiveness of smallholder farmer for six major crop district categories (i.e., sorghum and maize in Alemaya, wheat and barley in Hitosa, and teff (Eragrostis tef) and sorghum in Merhabete).

Hindi (2004) assessed the impact of subsidy policy on sustainable agricultural products of date palm in the United Arab Emirates (UAE). In this study, measures of economic protection were used. The Nominal Protection Coefficient for tradable Outputs (NPCO) was 1.39, which
indicated that the adopted agricultural policy allowed the market price to be larger than the international price by 39 per cent. The nominal protection coefficient for tradable inputs (NPCI) of 0.88 indicated that there was a decline in the costs paid by the farmer as a result of the government subsidy. This meant that the costs of tradable inputs were only 88 per cent of what they would have been at world prices (without policy). The effective protection coefficient (EPC) of 1.42 combined the two results of NPCO and NPCI. The Nominal Protection Rate (NPR) indicated that there was a big protection on the date palm, the value obtained was 50.

2.5 Market Interventions

Hanumappa and Anantharaman (1992) studied the trends in the growth of the Karnataka silk industry with a focus on some of the economic issues faced by it. The problems, both economic and non-economic facing the three main segments of the industry (mulberry cultivation, silkworm rearing and silk reeling) were examined. Sericulture is a more remunerative activity than commercial cropping. The growth pattern and production
trends of cocoons and raw silk indicated good future potential. The role of the government was outlined. There was a need to strengthen such areas as seed organization and post-cocoon technology through government intervention. Research and development also had a large role to play.

**Myers (1992)** examined the motivation for government intervention in agriculture to support farm prices and incomes. A model was outlined in which the government has a preference for higher farm incomes but fails to provide farmers with the socially optimal level of price support, even when one accepts the government's income distribution goals as a valid reflection of social preference. It was shown that agricultural policy had an intervention bias - government price supports generally were higher than would be socially optimal. The source of the intervention bias was a time inconsistency in optimal agricultural policy formation, caused by the government's inability to pre commit to a rule for setting future price support levels. Simulation results indicated that in some
circumstances the intervention bias in agricultural policy can be substantial.

2.6 Impact of trade liberalisation

Bertrand (1977) in his study on Thailand indicated that the most important form of government intervention in the agricultural sector has occurred by means of a heavy export taxation of rice and rubber. On the other hand, domestic sugar cane prices have generally been kept higher than the world market prices. Significant intervention also occurred in markets for agricultural inputs where protection of the fertilizer industry led to inflated prices for fertilizer. Apart from these major government interventions, the markets have been relatively free and market mechanisms have generally worked well in the Thai rural sector.

In the case of Pakistan, the structure of prices and subsidies was analysed by Gotsch and Brown (1977). In Pakistan export crops have historically been taxed and import crops subsidized. This was an attempt to move closer towards food self sufficiency. In the past the most important deviation from international prices occurred in
sugar cane. Prior to the devaluation in 1972, the nominal protection coefficient moved between 2.0 and 4.0. However, at the new official exchange and with higher international prices, sugar cane was no longer protected. In 1975, with the exception of maize, the protection coefficients of all major crops had a negative protection rate.

**Konandrears and Hurtado (1978)** analysed the trade flows in the international wheat market for the period 1951-56 to 1969-74. They attempted to explain the export performance of major wheat exporters and analysed the evaluation of trade patterns over time. They concluded that exporters who failed to concentrate their marketing efforts in fast growing markets performed poorly. Where as others that enjoyed a professional treatment in major markets and / or managed to overcome trade barriers in fast growing markets preformed well.

**Lutz and Scandizzo (1980)** evaluated the effect of government interventions in agricultural commodity markets for a sample of developing countries. The empirical results indicated that the agriculture sector in developing countries was often heavily taxed. As a
consequence, agricultural production was discouraged, while consumption was subsidized and increased in the government revenue provided by taxation were counter balanced by a loss of foreign exchange earnings.

Jamal (1978) examined the cotton pricing pursued by the Pakistan government and the nature of its intervention in the cotton trade and quantified the effects of price distortion over the period 1977-78 through 1982-83. Support prices were found to be closer to revenue maximization prices than to the border prices adjusted to farm gate level. Two distinct phases in the trends of nominal protection coefficients indicated the government's divergence in maximizing foreign exchange in earlier years to revenue maximization in later years.

Chatip and Prasert (1990) used a special equilibrium model to analyze the effects of trade liberalisation on the Asian and United States of America rice markets. They indicated that under rice trade liberalisation, the East Asian region became the major milled rice deficit area, drawing most of the supplies from major Asian exporters. They asserted that US rice exports
will also rise in East Asia markets. Further, if the level of subsidized in rice production in the US declines there would be a better chance for the US rice industry to rely on the high level of world rice price.

In their study on the relationship between world price instability and the farmer prices received in developing countries, Hazell et al. (1990) indicated that world prices for agricultural commodities were traditionally unstable, but they were particularly turbulent during the late 1970s and early 1980s. They used the available post war data on individual commodity prices to test whether world price instability was increasing and to examine its impact on the producer prices in developing countries. It was found that recent turbulence was more of a statistical fluke than the beginning of any long term increase in market instability. Further, while the variability in world prices had been entirely transmitted to developing countries in dollar equivalent of their export unit value, it had not been fully transmitted to the average producer’s prices. Real exchange rates, domestic marketing arrangements and government intervention resulted in controlling price
movements in favour of producer's in many developing countries.

**Gulati and Sharma (1995)** while analyzing the input subsidies in Indian agriculture revealed that the subsidies on key inputs have lost their rationale and are crowding out productive investment, damaging environment, accentuating inequality and promoting inefficient cropping pattern. They concluded that in order to have an accelerated and sustainable growth of Indian agriculture, the reforms in agricultural subsidies must start from liberalizing the output markets, opening them to export markets and there after involving farmers in carrying out reforms in input markets.

**Bhalla (1995)** examined the implications of globalization of Indian agriculture, keeping in view the dimensions of domestic demand and supply of food grains and some other important agricultural commodities in India. He asserted that the amount of food grain surplus over domestic demand is not likely to be substantial. Hence, he concluded that instead of export of food grains, it is realistic to concentrate on the export of high value
crops and allied agricultural products like dairying, horticulture, floriculture, fisheries, etc., which besides being high valued, would help in generating more employment.

**Gill and Brar (1996)** examined the competitiveness of some selected agricultural crops in the light of empirical evidence of domestic and international prices, the world commodity situation and the structure of the global market for agricultural commodities. He asserted that the globalization of agriculture will create increased international trading opportunities for those countries / regions which produce a large surplus both in wheat and rice crops, but to be internationally competitive in wheat and rice, the country like India will have to increase farm productivity, introduce efficiency in market handling and lower the tax rates in marketing of these crops. He suggested to concentrate on the export of processed materials instead of non processed agricultural commodities which will not only retain a large part of the value added within the country but also helps in generating more employment.