CHAPTER - II
REVIEW OF LITERATURE

2.1 INTRODUCTION

In the previous chapter captioned “Introduction and design of the study, statement of problem, importance of the study awareness of investors in Namakkal District, Research methodology, scope of the study, limitations of the study” etc., were dealt with. The basic necessity of any study is to find out the issues considered by the past researchers. In the following paragraphs the results of the earlier studies are summarized.

Not much work has been existing in literature pertaining to commodity exchanges, particularly with respect to the objectives that the present study seeks to accomplish. As such effort has been made in this chapter to review available studies pertaining to any aspect of commodity exchanges, and the studies related to the organizational structures of institutions.

Blyn (1973)\(^1\) estimated the degree of market integration by computing correlation coefficients for detrended and deseasonalized prices for eight wheat markets of Punjab and Delhi. Thus, totally nine detrended price series of twelve monthly prices were arranged and correlated. The results showed that the overall average correlation coefficient (r) for twelve months was 0.68. He reported that the average ‘r’ was equal to the ‘r’ between Delhi and other markets, indicating the dependence of Delhi market prices on the prices of all other collecting markets.

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A study by Chengappa and Muralidharan (1980)\(^2\) on pricing efficiency of Indian coffee, interpreted the pricing efficiency of Indian coffee markets in terms of spatial integration. The bivariate correlations of monthly prices among geographical markets at pool sale, wholesale and at retail levels used as indices of market integration showed a maximum at pool level because of better control by the Coffee Board. The efficiency was in the declining order from the wholesalers to retailers for want of adequate control by the Board. The location of distribution points and institutional constraints of differential sales tax were found to influence the movement of prices in vision.

An analysis of pricing efficiency in spatial markets a study by Gupta and Mueller (1982)\(^3\) suggested a technique for estimating the price relationship between regional markets, which avoids the ambiguity of the correlation coefficient. The method was based on Fama’s concept of pricing efficiency and consists of tests based on Granger’s causality. The method was applied to price series from three regional markets of slaughter hogs in West Germany.

Lundahl and Peterson (1982)\(^4\) studied the market integration for major food grains for the period 1969-74. The number of markets for each product considered was 19 for rice, eight for grain millet, 20 for grain corn, 11 for ground corn and 15 for seed beans. Monthly price series were detrended and the residuals were correlated. The results showed that there was not high correlation between the residuals. For all the food grains, there was a tendency for the correlation to be full towards the end of each year.

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Raveendran and Aiyasamy (1982)\(^5\) while analyzing export growth and export prices of turmeric from India observed cyclical pattern of variations in prices. 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 between the two was 0.9473. The high correlation in export and domestic prices of turmeric explained little variation in value of the variable Rt (ratio between price Pe to domestic price Pd in the year t, i.e., \((\text{Pe} / \text{Pd}) \times t\)) and consequently its non significant influence on export trade. The very high correlation of export price of turmeric with its domestic prices obviously confirmed the vulnerability of the latter to international price fluctuations.

Brorsen et al. (1984)\(^6\) reported that the use of univariate and multivariate time series analysis in the investigation of dynamic relationships among selected weekly import prices of rice in the European Economic Community (EEC). EEC imported rice from US, Thailand and Argentina. The results showed that Argentinean and US prices moved together. These two prices were influenced by the European market and react quickly to changes in Thailand prices. Thailand prices responded slowly to US and Argentinean prices.

The Ravallion’s regression model was used to study the integration of palm oil market in Peninsular Malaysia (Arshad and Gaffar, 1990)\(^7\). The crude palm oil market was observed to be spatially price efficient. The high integration of the crude palm oil markets was not surprising in view of the efficient and adequate infrastructure facilities available. The standardization of crude palm oil futures contract made the product homogenous leading to efficient price discovery thereby enhancing pricing efficiency.

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Using the correlation coefficient, Gemtessa (1991)\(^8\) analyzed the integration of Ethiopian coffee prices with the world prices. The correlation coefficient for the monthly average prices secured at domestic and world markets for 12 months lag was calculated. The bivariate correlation coefficient of the two market prices revealed that they move together in the same direction. The lagged cross correlations of domestic prices and world prices also revealed that they move together in the same direction. The lagged cross-correlations of domestic prices and world prices of coffee for the Period 1979-80 to 1987-88 indicated that the world prices of coffee had a stronger influence on the domestic prices than the domestic prices had on the world prices of coffee.

Briem (1993)\(^9\) analysed the market for American style super-premium’ ice cream in France. It was found that the market leader. American manufacturer Haggen-Dasz had a market share of 84 per cent, easily out-performing Gervais (10.5 per cent) and motta (5.5 percent).

Zimmermann and Borgstein (1993)\(^10\) analysed the growth in sales of organic products via the natural food stores in the Netherland. They expected that the total market share of organic foods will either stagnate or decline in the medium term if no further efforts are made to stop the declining trends in sales of organic products.

Alibekov (1994)\(^11\) found that Commodity exchanges are envisaged as a key element. There is a need for widespread education of agricultural producers in fundamentals of business and marketing, and also essential for organization of futures.

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10. Zimmermann, K.L. and Borgstein.M.H., 1993, marketing plans for organic food shops: towards increasing market size. mededeling landbouw economics institute, 481:

trading in grain, sugar, and vegetable oils, creation of proper futures market infrastructure, introduction of clearing accounts for participants, and provision of adequate information services.

Baharumshah and Habibullah (1994)\textsuperscript{12} employed the co-integration technique to analyze the long run relationship among pepper prices in six different markets of Malaysia. The co-integration technique was applied to weekly pepper prices for the period 1986-91. The empirical findings of the study indicated that regional pepper markets in Malaysia were highly co-integrated and prices of pepper tended to move uniformly across spatial markets indicating competitive pricing behavior.

The co-integration approach was used (Sinhroy and Nair, 1994)\textsuperscript{13} to analyze the pepper price variations in the world market. It was observed that due to open trade status of pepper, its prices had moved synchronously, indicating integration of the world-pepper market. It was pointed out that due to the oligopolistic nature of the world market for pepper; its prices did not deviate much. The domestic supply variables were found to be responsive to the international market conditions.

Kunnal and Shankarmurthy (1996)\textsuperscript{14} studied that the critically analyses the performance of the Karnataka State Seed Corporation (KSSC) with respect to its seed marketing activity. KSSC has adopted a mixed distribution network to sell seeds in the state. The quantity of seeds of different crops marketed by the KSSC increased during the study period. Though sales of seeds showed fluctuating trends, sales turnover showed an increasing trend. The share of cooperatives in the distribution of seeds of KSSC was not appreciable.


Srinivasan (1997)\textsuperscript{15} studied the organization and management effectiveness of regulated market committee; he observed more or less uniform organizational structure of regulated markets in Tamil Nadu. In Thirukoilur regulated market alone the post of junior superintendent existed. However, the number of posts in each cadre and the number of posts filled up varied directly with the quantum of arrivals.

Behura and Pradhan (1998)\textsuperscript{16} used bivariate price series correlation and Engle-Granger test to analyze the market integration for Orissa marine fish markets. The bivariate correlation coefficients for six selected market pairs ranged between 0.60 and 0.85. The test statistic obtained for all the pair wise markets were found to be less than the asymptotic critical value even at 10 per cent level excepting that of Cuttack-Paradip pair. Thus the marine fish markets in the state were assumed to be not integrated and hence quite uncompetitive. This was mainly attributed to poor infrastructure facilities at landing centers as well as the terminal secondary markets.

Bhatta and Bhat (1998)\textsuperscript{17} studied the extent of price relationship for arecanut between selected markets of Mangalore and Sirsi using the correlation coefficient method. The results revealed that the Mangalore market was more efficient than Sirsi market. The commercial nature of the crop and its diversified market conduct was clear from the fact that there was a direct relationship between the supply and price.

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Ramandev (1998)\textsuperscript{18} observed the management appraisal of Cashew processing industry in Uttara Kannada district of Karnataka. He found line organizational structure in cashew processing industry, which is simple and clear cut responsibility and authority with fast and easy feedback from the employees. The discipline among employees maintained easily and effectively. Similarly, increase in size of the unit their salary expenditure also increased.

Efremenko (2000)\textsuperscript{19} presented an overview of the main aspects of organizational structure that currently exists in the Belarussian agricultural sector. Prospects for the development of new organizational and legal forms of commercial enterprises in the agricultural sector were considered, taking into account the impact of the new Civil Code of the Republic of Belarus. It was suggested that a new structure for "agribusiness" could gradually be established, and this would embrace a whole range of ownership and management types, including corporations (open and closed joint stock companies, and limited liability companies), partnerships, cooperatives (production and consumer) and individual ownership (unitary enterprises, and daughter or subordinate companies).

The intra-state spatial integration of rice markets in India was investigated by Ghosh and Madhusudan (2000)\textsuperscript{20} who used ML method of co-integration. Intra-state regional integration of rice markets was evaluated by testing the long run linear relationship between the prices of the state-specific variety of rice quoted in spatially separated locations in four selected states. The cointegration results for Uttar Pradesh indicated that the regional markets are integrated


to such an extent that the Law of one price (LOP) holds for III and IV ARWA variety of rice. However, no evidence was found in favour of the LOP for the coarse or common variety of rice marketed in Bihar, Orissa and West Bengal, even though, the regional rice markets were found to be integrated. The results pertaining to inter-state regional integration of rice markets represented by four market centers chosen from the four selected states, revealed that even though the markets are integrated, the LOP does not hold.

Izvekov (2000)\(^\text{21}\) observed the switch from a centralized to a market economy in Russia has led to a change in the structure of the food distribution network and the rise of the wholesaler as the link between producer and retailer. An analysis was made of the wholesale sector, with particular reference to its role in shaping the operating system employed. With regard to Russian conditions, the organizational structure and management system of the MERKA fruit and vegetable company, set up in Moscow in 1992, was described. A private company, it had a 2-tier structure: one embraces the commercial director, the chief engineer and accounts department, while the other operates the commercial trading operations. Its modus operandi was said to permit it to undercut its rivals' prices by 10-15per cent, not least by operating through regular foreign importers, an important factor in view of the current import levels of 80per cent of all fruits and vegetables.

Kumar Ranjit (2000)\(^\text{22}\) analyzed the relationship between prices of rice in domestic market (New Delhi) with major rice markets of the world viz., Bangalore and Houston (USA) by using the co integration approach. The results clearly revealed that all the price series were not stationary and were not integrated in the long run.


\(^{22}\) Kumar Ranjit, 2000, Export performance of Agricultural commodities in India, Yojana, 44(7)41.
Kaku (2001)\textsuperscript{23} studied the broiler futures in Kanmon Commodity Exchange and he found that in 1973, in the Japanese Chicken meat market, the share of whole birds, cut-ups, parts and deboned meat and imported chicken meat was 59.3, 37.3 and 3.4 per cent, respectively. However, in 1994 the share shifted to 8.9, 59.7 and 31.4 per cent, respectively. The specification for commodity futures market should be the boneless leg meat of domestic broilers.

Kozachuk (2001)\textsuperscript{24} reported that any management practices existing in Russian enterprises were inappropriate for operating in market conditions. There was a clear need for management functions to be extended, and for new methods and approaches to management that are suitable for different ownership types to be developed. The process of managing a trading enterprise should be based on market principles and modern management methodologies. Key ideas in western management theory were considered, and used as the basis for different models of organizational structure in trading enterprises. These models include: the functional structure, where positions are grouped according to their main functional area; the divisional structure, where positions are grouped by similarity of products or services; and hybrid structures, which incorporate elements of both functional and divisional structures. Different management styles were also considered, specifically the directive and democratic styles. It was stressed that the choice of management style influenced by the economic situation and functional characteristics of any given trading enterprise.

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\textsuperscript{23} Kaku, k., 2001, studies on the broiler futures market, bulletin of national institute of animal industry. 2001; (61): 37-111. \\
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Naik and Jain (2001)\textsuperscript{25} studied that on assessing the efficiency of major commodity futures markets in India using the cointegration theory and they concluded that a major reason for the poor performance of Indian futures market could be the lack of adequate participation of hedgers in these markets. The management of the exchanges and the forward markets commission has to find ways to attract hedgers in order to improve the performance of these markets.

Madlapure et al. (2002)\textsuperscript{26} analysed the business turnover, and operational efficiency of dairy cooperative societies in Konkan Region, Maharashtra, India. Results reveal that: the sample cooperative societies have more share capital and borrowings compared to the progressive societies, but the latter have more accumulated funds; the cooperative societies do their business with very small working capital but with great efficiency; and the progressive societies have lower turnover compared to the other societies.

Basab Dasguptha (2004)\textsuperscript{27} in his study on the role of commodity future market in spot price stabilization, production and inventory decisions with reference to India shows the future price elasticity of production has always been greater or equal to one and increasing profit by increasing price is not possible. It also shows that the future price elasticity of inventory was inversely related with the carrying cost. Therefore, on unnecessary hoarding will increase the carrying cost leading to a lower responsiveness of inventory to future prices.

\textsuperscript{25} Naik, G. and Jain, S. K. 2001, Efficiency and unbiasedness of Indian commodity futures market. Indian Journal of Agricultural Economics, 56(2): 185-197


Aviral Chopra and Blesser (2005)\textsuperscript{28} studied the Price Discovery in the Black Pepper Market in Kerala, India. They explored empirically the incidence of price discovery for black pepper in spot market, the nearby and the first distant future market by using daily data employing the method of cointegration and directed a cyclic graphs. The study reveals that price information is discovered in the future market and the results in these three markets are tied together in one cointegration relationship, spot and first distant future contract do not respond to perturbations in the co integrating on by the near future contract adjust to shock in the long run relationships hoarding these three market together.

Jairatt and Kamboj (2005)\textsuperscript{29} reported that the total commodities traded in the agricultural commodities accounted for nearly 95 per cent during 2002-03, which hovered around 92 per cent in 2004-05. He mentioned that the removal of ban, share of national commodity exchanges increased from nearly 6 per cent and that of regional exchanges declined from 94 to 27 per cent during the period.

Zapata et al. (2005)\textsuperscript{30} examined the relationship between 11 sugar futures prices traded in New York and the world cash prices for exported sugar. It was found that the futures market for sugar led the cash market in price discovery. However, find evidence that changes in the cash price causes changes in futures price, that is, causality is unidirectional from futures to cash. The finding of cointegration between futures and cash prices suggests that the sugar futures contract is a useful vehicle for reducing overall market price risk faced by cash market participants selling at the world price.


\textsuperscript{29} Jairatt, m.s. and Prashanth Kamboj., 2005, some constraints to Indian agriculture commodity futures, Indian journal of agricultural marketing, (conference special), 19(2), 2005

(i.e., not enjoying favorable trade incentives). Further reliability on the usefulness of the WSF as a price discovery market is found through the impulse response functions; a shock in the futures price innovation generates a quick (one month) and positive response in futures and cash prices.

Babula et al (2006)\textsuperscript{31} applied Johansen and Juselius' methods of the co-integrated vector auto regression (VAR) model to a monthly US system of markets for soyabean, soya meal, and soya oil. Analysis of the error correction or co integration space illuminates the empirical nature of policy-relevant market elasticities, and of the effects of important policy, market, and institutional events on US soya-related markets. A statistically strong US demand for soyabean emerged as the primary co integrating relation in the error-correction space.

Labys and Cohen (2006)\textsuperscript{32} studied the global wine market has witnessed major changes in recent years. Some of these changes are structural in nature or trend-following, whereas others are cyclical. Recently, new market entrants have increased their exports not only to traditional European markets but to other importing regions as well, whereas Old World producers have experienced declining market shares. However, the evidence examined here suggests that market share data also contain strong cyclical components. Mixed results also occur when the wine export data are disaggregated into products.

Narender L. Ahuja (2006)\textsuperscript{33} has analyzed that the Indian economy is witnessing a mini revolution in commodity derivatives and risk management. Until 2002 commodity derivatives market was virtually non-existent, except some negligible activity on an OTC basis.

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Now in September 2005, the country has 3 national level electronic exchanges and 21 regional exchanges for trading commodity derivatives. This paper analyses questions such as: how did India pull it off in such a short time since 2002? Is this progress sustainable and what are the obstacles that need urgent attention if the market is to realize its full potential? Why are commodity derivatives important and what could other emerging economies learn from the Indian mistakes and experience? The policy changes favoring commodity derivatives were also facilitated by the enhanced role assigned to free market forces under the new liberalization policy of the Government. The commodities derivatives market has seen ups and downs, but seem to have finally arrived now. The market has made enormous progress in terms of technology, transparency and the trading activity. Interestingly, this has happened only after the Government protection was removed from a number of commodities, and market forces were allowed to play their role.

Ghoshray (2007)\textsuperscript{34} in his study revealed that Durum wheat is one of the commodities for which there is intense trade competition between the United States and Canada. He examined the relationship between Canadian and U.S. Durum wheat prices using co integration and an asymmetric error correction approach. The overall results suggest that a long run relation holds between the U.S. and Canadian durum wheat prices. The U.S. price responds to restore the equilibrium relationship with the corresponding Canadian price, while the Canadian price evolves independently. Using tests for structural change, it is revealed that changes in Canadian domestic policy (the repeal of the WGTA) had an effect on this long run relation. Since the withdrawal of the WGTA, quality differences in durum wheat for both countries seem to matter in the dynamics and integration of U.S. and Canadian durum wheat prices.

Though we have found very little literature available on commodity derivatives specially, even the papers pertaining to the contribution on given topic is mentioned here. J.N. Dhankar (2007)\textsuperscript{35} has evaluated that commodity exchanges in India are steadily gaining popularity and provides an understanding on how commodity exchanges can mitigate trading risk. He correlates the relationship between spot price and futures prices in commodity market in the entire risk management process. The coefficient of correlation between spot and futures prices of 11 commodities at MCX and 6 commodities at NCDEX has been found of high degree.

Sumit Gupta (2008)\textsuperscript{36} explains the economic functions of the commodity futures market, regulations of the commodity derivative market and the present scheme of regulation in Indian commodity derivatives market and the economic functions of the commodity futures market includes market creation by entering into futures contract. The regulation of commodity market is required to ensure that market efficiently performs the twin economic functions of price discovery and price risk management to properly integrate spot and futures prices, to provide protection against risk of volatility in prices.

Pravakar sahoo and Rajiv Kumar (2009)\textsuperscript{37} has evaluated that trading in commodity derivatives on exchange platform is an instrument to achieve price discovery, better price risk management besides helping macro economy with better resource allocation. The govt. has proposed to impose transaction tax by 0.017% of trading volume in the 2008-2009 budgets.


\textsuperscript{36} Sumeet Gupta” An insight into the commodity derivative market” journal of the ICFAI university press, all rights reserved (2008) (45-50)

\textsuperscript{37} Pravakar Sahoo & Rajiv Kumar “Efficiency and Futures trading- Price Nexus in Indian commodity futures markets” journal of global business review July/December 2009 vol.(10)
He examines the efficiency and futures trading price nexus for 5 top selected commodities namely gold, copper, petroleum crude, soya oil and chana in commodity futures market in India. He suggests that commodity futures market is efficient for all 5 commodities. Further he has not supported that futures market leads to higher inflation due to lack of evidence.

2.2 CONCLUSION

The review of previous study is based on organizational structures of commodities market share analysis, market integration and so on. Another research is done with explanation of economic functions of commodity futures market, regulations of the commodity derivatives market and the present scheme of regulation of Indian commodity derivatives market. But, the amount of knowledge the investors have on commodity market has not been death with. Therefore, a study on investor’s awareness towards commodities market in Namakkal District, Tamil Nadu and India is considered essential in this growing commodity trade.