



Analysis of Market Structure, Conduct and Performance for Pepper in Borno State, Nigeria: A Review

¹Bukar, U., ²Mohammed, D., ¹Wakawa, R., ³Shettima, B. G., and ³Muhammad, S. T.

¹Department of Agricultural Technology, Ramat Polytechnic Maiduguri, Borno State, Nigeria. ²Centre for Arid Zone Studies, University of Maiduguri, Nigeria.

³Department of Agricultural Economics, Faculty of Agriculture, University of Maiduguri, Nigeria.

ABSTRACT

The study review the analysis of market structure, conduct and performance forpepper in Borno State, Nigeria. The data for this study was obtained from secondary sources such as journals, conferences, thesis and dissertation. The findings of the study revealed that market structure is an important factor that influences the performance and efficiency of a market. Descriptive statistics and Ginni coefficient were used for the study. The result showed that information transfer was timely and satisfactory and some degree of product differentiation exists in the market. The analysis indicated that, out of 4,836 correlation coefficients computed for the product, only 19 reached at the 0.09 level or more, while 424 were zero or negative. This indicates that the integration of Nigerian stable food market appeared to be very low. The reasons were lack of standardized measures for quality, defect in data and poor market information system. The result showed that, market margin was low (47.84%), marketing efficiency was appreciable (42.29%) while pricing was inefficient (-336.54%) and net returns per head was ₦, 698.76. This concludes that the market is a fairly efficient market with an efficient pricing system.

Key words: Analysis, Market, Structure, Conduct, Performance, Pepper, Borno State.

INTRODUCTION

The term market stood for the place where buyers and sellers gather to exchange their goods, such as village square (Bartels, 1968). The concept of market gave rise to the concept of marketing, thus marketing is a process by which individuals and groups obtain what they need and want by creating and exchanging products and value with others. Olukosi *et al.*(2007) defined agricultural marketing from both the micro and macro points of view. The micro point of view is concerned with the individual participant in marketing be it the farmer or the business firm. From this perspective, agricultural marketing could be defined as the performance of all business activities which direct the forward flow of goods and services to consumers in order to accomplish the producer's objectives. The macro point of view of marketing on the other hand examine the total system of economic activities concerned with the flow of agricultural products front producers to final consumers, the kinds of institutions and the price making mechanisms that guide those flows, the interactions among consumers, agribusiness firms, farmers and even government that determines the levels of expenditure and the sharing of those expenditures as income to market participants (Olukosiet *al.*, 2007).

Economists have focused the efficiency of marketing system by using the market structure, conduct and performance (SCP) model that is a basic analytical framework. The SCP model deals with the organization and operation of the free enterprise sector of the industrialized economies, and it was largely developed to help explain the behaviour of industrial sector in the United States of America (Mari, 2009).

The model combines economic theory and empirical observations of industrial experience in an attempt to help and understand the operations of industries and their contribution to economic development.

Girohet *al.*, (2010) observed the structure, conduct and performance of farm gate marketing of natural rubber in Edo and Delta States of Nigeria, Copies of questionnaires were used on 75 randomly selected rubber marketers. Data collected were analyzed using Gini coefficient and budgetary technique. The results indicated that gross margin and net profit were N17,821.31 and N17,278.47 while the gross margin and net profit per marketer were N62,588.47 and N60,682.00 respectively. The marketing margin and efficiency were 44.03 and 122%, respectively. Rate of return was also high. The Gini coefficient analysis showed that the market was concentrated (0.256), showing the possibility of non-competitive behaviour and equality in earnings among marketers.

Market structure can be defined as those characteristics of the organization of the market which seem to influence strategically the nature of competition and pricing within the market (Olukosiet *al.*, 2007). Among the factors considered important in determining market structure are; the number and relative size of buyers and sellers, the degree of product differentiation, the ease of entry and exit of buyers and sellers into and out of the market and the status of knowledge about costs, prices and market conditions among the participants in the market. Market conduct relates to the behaviour of the firms or decisions that firms make relating to their pricing and output policy and other competitive tactics. In other words, market conduct refers to actions which firms follow in adopting or adjusting to the market in which they buy and sell. It includes the method employed by group of firms in determining price and output, sales promotion policies, policies that are directed at altering the nature of the product sold and various selling tactics that are employed to achieve specific market results. Olukosi and Isitor (1990) defined market performance as the strategic end result of market adjustments engaged in by buyers and sellers. In order words, market performance is the appraisal of the extent to which the interactions of the buyers and sellers in a market stimulate results that are consistent with social purposes.

Market Structure

The basic component of the structure, conduct and performance (SCP) model described by Bain (1968) is the market structure, i.e. the number and size distribution of buyers and sellers, the conditions of entry and the degree of product differentiation. Market structure is defined as the characteristics of the organization of a market, which seem to influence strategically the nature of competition and pricing behaviour within the market. Structured characteristics may be used as a basis for classifying markets, Adegeye and Dittoh (1982) identify different types of market structure as perfectly competitive, monopolistic, oligopolistic and pure monopoly. Koch (1980) identified four factors to be considered in determining market structure as degree of seller concentration, the degree of buyer concentration, the degree of product differentiation and the condition of entry. These elements measure the extent of deviations from the perfectly competitive norm. The larger the deviation, the more imperfectly competitive is the market, which an extreme case will be monopoly.

Structure of a market consists of characteristics of the organisation of the market which seems to influence the nature of competition and pricing within the market, particularly the degree of seller and buyer concentration, entry condition, the extent of agents and product differentiation, the distribution of market information and its agency in sharpening price and quality comparisons (Bila and Bulama, 2004). These structural characteristics are therefore, used as a basis for classifying markets. Markets may be perfectly competitive, monopolistic or oligopolistic. The ideal market structure for optimal efficiency is pure competition. A market is said to be competitive when there are many buyers and sellers, free entry conditions, high degree of price competitions and perfect market knowledge. Bila and Bulama (2004) observed in their study, structure of Maiduguri Cattle Market, Borno State, that market structure is an

important factor that influences the performance and efficiency of a market. Primary data were collected from questionnaires randomly administered to the respondents. Descriptive statistics was used to analyze product differentiation and market information. Gini coefficient was used to determine market concentration, while scale economics was used to determine ease of/barrier to entry or exit. The results showed that information transfer was timely and satisfactory and some degree of product differentiation exist in the market. Cattle are differentiated in terms of age, breed, weight and sex. The concentration of sellers is low while entry is free. The market is thus an imperfectly competitive market of oligopolistic nature.

In analyzing market structure, market concentration and entry conditions are considered. Market concentration is defined as the number and size distribution of sellers and buyers in the market. Market concentrations play an important role in the determination of market behaviour within an industry because it affects the interdependence action among firms. The greater the degree of concentration, the greater is the possibility of noncompetitive behaviour, such as collusion in the market. A market concentration ratio is a measure of the percentage share of the market controlled by a specified percentage of firms ranked in the order of market share from largest to the smallest (Karugia, 1990). High concentration and in equality will however, indicate oligopolistic tendencies, low concentration suggests tendencies towards competition provided there are no serious barriers to entry in to the market. Gini coefficient can be used to determine the degree of market concentration of sellers in the market. According to Okereke and Anthonio (1988), Gini coefficient is more precise than Lorenz curve. Gini coefficient can be computed using the formula:

$$G. C = 1 - \sum XY$$

Where,

G = Gini coefficient

X = Percentage share of each class of seller.

Y = Cumulative percentage of the sales

The Gini coefficient ranges from zero to one. A perfect equality in concentration (low) of sellers is expected if Gini coefficient tends toward zero, while perfect inequality in concentration (high) of sellers is expected, if Gini coefficient tends towards one. However, the perfectly competitive market model is often used in economics as a standard by which structure, conduct and performance of market can be compared and evaluated. Large number of buyers and sellers, low barrier to entry, product homogeneity and complete knowledge of alternative choices on the part of producer and consumer characterized the competitive market model.

Pujo (1996) observed market structure for rice in eastern Guinea is imperfectly competitive as the result of the study reveals that Gini coefficient of 0.6 which is categorized as imperfectly competitive of oligopolistic market. Okereke and Anthonio (1988) observed that there was some degree of concentration in the grain market in eastern Nigeria and concluded that the market is monopolistic in nature because there were few buyers and sellers and there was product differentiation in terms of size, colour and quality of grain as well as method of packaging. Ndambuki (1998) indicated that in pepper marketing three closely associated aspects have to be considered and they are products, customers and the competitors in the pepper industry He failed to elaborate further on the market structure, conduct and performance of the three aspects mentioned above.

Elizabeth *et al.*, (2001); studied market structure and the degree of competition in maize hybrid seed retailing, the structure and conduct of the market was analyzed in Trans Ngozi District, in western Kenya. The distribution with a Gini coefficient of 0.6 in the district is categorized as oligopolistic, with 61 - 67% of the market share going to the four largest firms. The results of the study also reveal that conditions for

competition were lacking mainly due to barriers to entry such as institutional restrictions and high initial capitals. However, traders did not collude among themselves to decide on prices or control sales volume. The structure of the market was analysed in four aspects, namely: market concentration, product differentiation, market integration and conditions for entry in the hybrid maize seed business. Analysis of the market structure revealed that several factors favoured imperfect competition in the hybrid maize seed marketing at the retail level. These include unequally distributed shares of transaction among traders, product differentiation and barriers to entry.

Nadda and Swamp (1979) stated that while agricultural markets are generally reasonably well integrated, there is lack of evidence relating to fruit crops which are perishable, bulky and localized in production. They undertook a study to assess the degree of competition in the apple trade in India. The result showed that there exists some degree of competitiveness only in the Royal Delicious variety of apple and price differences were close to transport costs; also markets are well integrated (correlation coefficient, 0.80). Moreover, they pointed out that the situation is less perfect for other varieties as revealed by low correlation coefficient (<0.5), and price differences exceeding the transport costs.

Despande (1979) tested the hypothesis that small scale farmers always get comparatively lower prices than medium and large scale farmers. The result of the study supported the hypothesis that small scale farmers are price disadvantaged. This is due to the fact that the main problems facing small scale farmers are lack of capital, limited marketable surpluses, lack of trading skills, low education and know how, and lack of access to extension agencies. Southworth (1979) conducted studies in Atebubu district Ghana. The study aimed at examining the efficiency of the food marketing system in view of such allegations as inefficiency and oligopsony that were believed to characterized the market. The analysis reputed the above allegations and proved that, despite the fact that it is not perfect; food marketing in Atebubu is sufficiently competitive to prevent traders from reaping excess profit. A large number of buyers and sellers participate and there was no evidence of price manipulation.

Taru *et al.* (2010), used total value of sales as index of measurement of the market share in 2007/2008 season for their study structural analysis of paddy markets in southern part of Taraba State, Nigeria. The result of the study indicated that the seller's concentration was high with high income inequality in paddy rice retail than wholesale in the area with Gini coefficient value of 0.74 and 0.53 respectively. This could result from the differences in their access to ownership and control of physical marketing facilities, funds availability and market behaviour and conducts. The market therefore, exhibit features of imperfect markets of "monopolistic competition".

Market conduct

Market conduct relates to the behaviour of the firms or the decision that firms make in relation to their pricing and output policy and other competitive tactics (Olukosi and Isitor, 1990). In other words market conduct, refers to the actions which firms follow in adopting or adjusting to the market in which they buy and sell. It includes the methods employed by group of firms in determining price and output, sales promotion policies that are directed at altering the nature of the product sold and various selling tactics that are employed to achieve specific market results. Olukosi and Isitor, (1990) pointed out that the most important factors used in assessing market conduct are methods of determining price and output, sales promotion policy, product policy, the presence or absence of exclusionary tactics directed against established rivals or potential entrants and research and development. Market conduct is heavily influenced by the market structure. It is the link between the market structure and performance since the behaviour of sellers in a market could adversely affect the efficiency of the entire system, government throughout the world watch closely the conduct of the market with a view to taking remedial actions

when the conduct being pursued is viewed as inimical to efficient marketing. Ode *et al.*, (2007) disclosed that market conduct deals with the behaviour of firms. Firms that are price makers are expected to act differently from those that are price takers.

Allet *et al.*(2008); in their study, economic analysis of fresh fish marketing in Maiduguri Gaboru market and Kachallani Alan Dam, using descriptive statistics, linear regression and market margin observed that majority of the marketers (81.67%) were males, while 18.33% were females. The result of the study indicated that, purchase price, transportation cost, and tax had positive and significant coefficients, which shows that they are the major determinants of selling price in the market. Jones (1994) examined the marketing efficiency of staple foods in Nigeria using time series data. Results of the seasonal price analysis indicated that, price which appear to be subject to irregular fluctuation is greater than might be expected, therefore, one can make the inference that storage is an effective means of reducing price fluctuations. The analysis indicated that out of 4,836 correlation coefficients computed for the six products, only 19 reached at the 0.09 level or more, while 424 were zero or negative. This indicates that the integration of Nigerian staple food market appeared to be very low. The reasons were lack of standardized measures for quality, defect in data and a poor market information system.

Market performance

Market performance as described by Olukosi and Isitor (1990) is the strategic end result of market adjustments engaged in by buyers and sellers. In other words, market performance is the appraisal of the extent to which the interactions of the buyers and sellers in the market stimulate results that are consistent with social purposes. The main features used in assessing market performance are the level of profit, scale and utilization of plants and firms, scale and promotion costs and character of the product and progressiveness. Bain (1968), disclosed that it is possible to evaluate the impact of structure and conduct characteristics on market performance.

Brestler and King, (1970), opined that market performance could be the impact of structure and conduct as measured in terms of variable such as prices, cost and volume of output. Olukosi and Isitor (1990), pointed out that, it is very difficult to measure market performance because of the subjective nature of the performance measures. However, performance measures could be modified to suit the nature of the particular problem. Bila and Bulama (2006) observed in their study aimed at determining the efficiency of the marketing system of Maiduguri cattle marker, by measuring performance of the market. The study made use of primary data, which were collected from questionnaires randomly administered to the buyers and sellers. Performance was measured in terms of price analysis, marketing margins, cost and returns analysis and marketing efficiency. The analysis of the results showed marketing margin was low (47.84%), marketing efficiency was appreciable (42.29%) while pricing was inefficient (-336.54%) and net returns per head was ₦1, 698.76. This concludes that the market is a fairly efficient market with an inefficient pricing system.

Gross margin, marketing margin and marketing efficiency are the major indicators of market performance, while costs and returns are the indicators for farm profitability analysis. According to Olukosi and Erhabor (1988), Gross margin is used as a tool for planning where fixed costs is a negligible portion of the enterprise. Gross margins are calculated by subtracting fixed and variable costs from the gross returns. Therefore, Gross margin is used as a budgeting tool for measuring efficiency and profitability among different enterprises. Net returns would roughly equal a "fair" return to the middleman's capital, if the market were perfectly competitive. Iheanacho (2000) uses the Gross Margin method in his study of millet production under different cropping systems in Borno State to measure profitability.

According to Olukosi and Isitor (1990), marketing margin refers to the difference in prices paid for a commodity at different stages of the marketing systems. Time, place, form and possession are important factors that affect marketing margin. Therefore, marketing margin represents difference in price of a giving commodity at different stages of time, form, place and possession as the commodity moves from the primary producer to the ultimate consumer.

Adegeye and Dittoh (1985) defined marketing margin as the difference in price paid to the first seller and that paid by the last buyer of the same commodity. Kohl and Uhl (1985) also defined marketing margin as the difference between what the consumer pays for the farm product and what the farmer receives. Jones (1996) viewed marketing margin as the difference between purchase price, transportation cost, as well as trader's profit. The marketing margin may fluctuate due to the marketing services provided, risk and uncertainty borne by each of the market participants, perishability of the commodity as well as the number of marketing agents in the marketing channel. Tomek and Robinson (1981) pointed out that marketing margin provides only one point of reference in the measurement of performance and should be compared with measures of profits earned by marketing firms in order to ascertain whether the margins are excess.

However, middlemen in the course of discharging their role in the marketing system, they bear the cost of labour, equipment, transportation in carrying out their marketing functions. Marketing costs are often erroneously assumed to be synonymous with marketing margin but the true relationship is that marketing margin includes marketing costs plus the normal profit or loss earned by the market intermediaries, as the commodity passes through the marketing system (Olukosi and Isitor, 1990). According to the perfectly competitive model for market behaviours, the net margin received by middlemen is not larger on the average, than that needed to keep them in that particular business. If there are larger profits, other firms would be attracted into the industry and profits would decrease eventually.

However, if entry into the industry is restricted as a result of some market imperfections, thus middlemen may obtain larger marketing margins than would be possible if the number of buyers are greater and competition sharper (Schied and Sutinen 1981). Jones (1996) pointed out that marketing margin and net returns to grain trading are low, unless the traders are able to finance risk and inter-seasonal storage.

Thakur (1973) analyzed the performance of the Indian apple market, exploring the possibility of improving the efficiency. The result of the study revealed that the marketing system for apples in India was well integrated (correlation coefficients >0.85 between Calcutta, Delhi and Madras and >0.70 between Bombay, Delhi Madras). However, his study cautioned that trader's profit margin accounted for a significant proportion (45.5 percent) of the price paid by the consumer. The major implications of this study were that there was scope for traders to earn high profits. It was also viewed that trader's market power in procurement and stock should be regulated to ensure fair prices for producers and consumers through the establishment of cooperatives, market information centers and state controlled storage facilities.

Gupta and Ram (1979) analyzed the performance of vegetable marketing in Delhi. The price spread was measured by tracing specific lots of vegetables, through the marketing channel until they reached the final consumers. The results revealed that producers received 38 percent of the consumer price and those middlemen margins were excessive given the level to risk and marketing activities. The analysis showed that the establishment of cooperatives at both producer and consumer levels were required and that it was the government's responsibility to make available more market information, storage facilities and processing plants to increase the market efficiency of vegetables.

Roberts (1989) assessed the performance of cassava and Gari marketing systems in Sierra Leone covering two dimensions with primary data gathered from a farm survey. One dimension was assessing how closely the existing marketing system matched the perfectly competitive model and another was an analysis of marketing margins and price correlation to determine the economic performance of the marketing systems and to evaluate the degree of market integration. Results of the study revealed that the cassava and Gari marketing system appears to be competitive with a large number of small-scale traders, producers and buyers.

The Gross Margin analysis showed returns to market operations were modest, and that the producer's share of the consumer's price ranged between 67 and 78 percent. Spatial and temporal price analysis also revealed that the market for fresh cassava and Gari are poorly integrated, fragmented and under developed. Hays and Mc Coy (1977) analyzed the spatial and temporal aspects of marketing efficiency for the marketing system of millet and sorghum in the northern part of Nigeria. Price relationships were analyzed by examining the significance of storage costs as a factor in explaining seasonal price rises. Two important hypotheses were tested: (i) In a perfectly competitive market, perfect information is assumed to prevail and traders in each market know perfectly the situation in all markets, so that inter-market price differentials would reflect only transport and handling costs of transfer; and (ii) In a perfectly competitive market, economic theory suggests the post-harvest price rise will be equal to the cost of storing grain, a price rise higher than the storage cost provides the opportunity for traders to make more than normal profits.

Market channels

A market channel is simply the path of a commodity from its raw form to the finished product or the path of a product as it moves from the producers to the final consumers (Hays 1975). Marketing channels are important in evaluating marketing system because they indicate how the various market participants are organized to accomplish the movement of product from the producer to the final consumer. Olukosi and Isitor, (1990) categorized marketing channel into centralized and decentralized channels. Following the above definition and categorization, a centralized marketing channel is one in which the farmer's products are brought together in larger central and terminal markets. There, they are purchased by the processor or wholesalers from commission men and brokers who act as the farmers' selling agents. A decentralized channel on the other hand is one that does not use such established large market facilities, rather wholesalers and processors purchase directly from the farmers. Olukosi *et al.* (2005) disclosed that marketing channel is the sequence of intermediaries or middlemen and the marketers through which goods pass from producers to consumers. Thus, marketing channels are more valuable because it shows at a glance various agencies and ways the product moves. It also helps in assessing performance of a market. If the route is too long, this shows that there are too many middlemen in the marketing system and the cost is likely to be high.

Marketing chain

The marketing chain describes the succession of markets through which products pass until they reach the consumers. Marketing chain is a component of marketing channel. Thus marketing chain helps to reveal the relative importance of various markets or exchange points in the marketing system. Coleman and Young (1989) described marketing chain in terms of the category of business involved at a particular stage. Following this description, marketing chains are the series of changes of ownership and economic processes by which products are transformed from the primary producer to the final consumer. Marketing chain between primary producer and the ultimate consumer may involve many intermediaries. Thorbeeke (1992) disclosed that during the marketing process, commodities gain value as they are moved through space, held overtime and transformed. This shows that, each commodity has its own particular marketing

chain and network and a set of transactions corresponding to the various functions performed by different actors as the commodity progresses from producer to ultimate consumer.

Olukosi and Isitor (1990) viewed marketing chains as part of marketing channel and described it as succession of market through which products pass until they reach the consumers. This is a clear indication that, the marketing chain between producers and consumers for food crops is long, depending on the type of crop. For example, a typical marketing chain might involve producer, assemblers who bulk up supplies, wholesalers and processors, retailers and finally consumers.

Each exchange configuration can be considered as a node in a marketing chain. Thorbeeki (1992) pointed out that, the more such nodes (exchange configuration) along a marketing chain, the higher the overall transaction cost and the greater the difference between the prices paid by the urban customers at the end of the chain. Hence marketing chain is useful because it reveals the relative importance of the urban customers at the end of the chain. Thorbeeki (1992) also opined that marketing chain is useful, because it reveals the relative importance of the various markets or exchange points in the marketing system.

CONCLUSION

The review revealed that market structure for most agricultural commodities varies from one place to another and from one commodity to another due to social economic, political and environmental factors. It is true that structure absolutely determines conduct and performance. Market conduct quite often is difficult to determine because of lack of data on market participants, particularly in developing countries. Therefore, it is necessary to use well developed analytical techniques when studying a particular market situation in assessing a performance criteria.

REFERENCES

- Adegeye, A. J. and Dittor, J. S. (1985). *Essential of Agricultural Economics*, Second Edition Impact Publishers Ltd; Ibadan, Nigeria, 37-46.
- Ali, E. A., Gaya, H. I. M. and Jampada, T. N. (2008). Economic Analysis of Fresh Fish Marketing in Maiduguri Gaboru Market and Kachallari Alau Dam Landing Site of Northeastern., Nigeria. *Journal of Agriculture and Social Science*, 1:23-26.
- Bain, J. S. (1968): *Industrial Organisation*, John Willey and Son, New York, 71-87.
- Bila, Y. and Bulama, Y. (2004). Structure of Maiduguri Cattle Market, Bomo State Nigeria. *Global Journal of Agricultural Sciences*, 4(2):159-164.
- Bila, Y. and Bulama, Y. (2006). Marketing efficiency: A case study of Maiduguri Cattle Market, Borno State, Nigeria. *Global Journal of Pure and Applied. Sciences*, 13(1):7-12.
- Brestler, R. G. and King, R. A. (1970): *Market prices and interregional trade*, New York, U.S.A. John Willey and Sons., 12pp.
- Coleman, D. and Young T. (1989). *Principles of Agricultural Economics*, Market and prices in less developed countries, Cambridge University Press, 7-9.
- Despande, S. L. (1979): Efficiency in Fruit Marketing. A case study of small farmers in Maharashtra, *Indian Journal of American Statistical Association*, 74:241-254.
- Elizabeth, N., Hugo, D. G. and Willis O. K. (2001). Market structure and conduct of the Hybrid Maize seed industry, a case study of the Trans-Ngozi. *Seventh eastern and southern Africa Regional Maize conference 11-15 February*, 474-479.

- Giroh, D. Y., Umar, H. Y. and Yakub, W. (2010). Structure conduct and performance of farm gate marketing of natural rubber in Edo and Delta States, Nigeria, *African Journal of Agricultural Research*, 5(14):1780-1783.
- Gupta, A. K. and Ram, G. S. (1979). Behaviour of Marketing Margins and costs of Vegetables in Delhi: *Indian Journal of Agricultural Economics*, 43 (4):209-210.
- Hays, H. M. (1975): The marketing and storage of vegetables in Northern Nigeria, Satnaru Miscellaneous Pepper No. 50, Institute for Agricultural Research, Zaria. 17-19pp.
- Hays, K. M. and McCoy, J. H. (1977). Food Grain Marketing in Northern Nigeria. Spatial and Temporal Performance. *Journal of Development Studies*, 14 (2):182-192.
- Iheanacho, A. C. (2000). Economics of Millet production under different cropping systems in Borno State, *Unpublished PhD Thesis*. Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria, Nigeria. 40-41pp.
- Jones, S. (1996): Food Markets in the developing countries: what to do we know? Food Studies Group Working Paper No. 8, Oxford. 6-7pp.
- Jones, W. O. (1994): Regional Analysis and Agricultural Marketing Research in Tropical Africa: Concept and Experience. *Food Research Institute Studies*, 1:3- 28.
- Karugia, J. T. (1990): Competition and efficiency in beef retailing in a metropolitan area. The case study of the city of Nairobi, *PhD. Thesis*, Department of Agricultural Economics, University of Nairobi. 91-93pp.
- Koch, J. V. (1980): *Industrial Organisation and Prices*, Second Edition, London, UK Pretence Hall International.
- Kohls, R. L. and Uhl, J. N. (1985). *Marketing of Agricultural Products*, Sixth edition, Macmillan Publishers Company, New York, 19-21.
- Mari, F. M. (2009). Structure and Efficiency Analysis of Vegetable Production and Marketing in Sindh, Pakistan, *Unpublished Ph.D Thesis*, Department of Agricultural Economics, Faculty of Agricultural Social Sciences, Sindh, Agriculture University, Tandojam. 13-15pp.
- Nadda, A. and Swamp, (1979). Market integration; A study of Apple Prices in India *Indian Journal of Agricultural Economics*, 34 (4):216-229.
- Ndambuki, F. M. (1998). Kenya Pepper Company, activities and organizations. In Nwangi W. *Pepper production and supply*. Teaching notes for the training workshop on pepper production and supply policy. 25-29pp.
- Okereke, O. and Anthonio, Q. B. (1988). The staictural characteristics of market for grains in Eastern Nigeria; in T. O. Adekanye, *Readings in Agricultural Marketing Longman Nigeria*, 11-19.
- Olukosi, J. O. and Erhabor, P. O. (1988). *Introduction to farm management economics, principles and application*, Agltab Publishers, Samaru, Zaria, 29pp.
- Olukosi, J. O. and Isitor, S. U. (1990): *Introduction to Agricultural Marketing and Prices Principles and applications*, Living Book Series Abuja,
- Olukosi, J. O., Isitor, S. U. and Ode, M. O. (2007): *Introduction to Agricultural Marketing and Prices, Principle and applications*. Living Books Series, GU Publications, Abuja, FCT. 37-44.

- Pujo, L. (1996): Methodology for Investigation of the embedness of markets in social institutions; application to the Gender and the market for local Rice in eastern Guinea. D.phil. Thesis, Department of Social Science, University of Oxford.
- Roberts, A. (1989): Food policy in Sierra Leone. *PhD. Thesis*, University of London, Wye College. 91 - 97pp.
- Scheid, S. T., and Sutenin, J. C. (1981): The structure and performance of wholesale marketing of Fin Fish in costa Rica; in J.C. Suteinin and R.B. Pollack, (Eds) *Small Scale Fisheries in Central America; Acquiring Information for decision making* Lyne Rienner, Publishers, Inc. Boulder. 12 - 17pp.
- Southworth, R. V. (1979): Food crop marketing in Atebubu District, Ghana. *Food Research Institute Studies*, 8(2):95-124.
- Taru, B. V., Jonathan, R., Lawal, H. (2010): Structural Analysis of Paddy markets in Southern parts of Taraba State, Nigeria. *Journal of Agriculture and Social Science*, 10:110-12.
- Thakur, D. S. (1973): Pricing efficiency of the Indian Apple market, *Indian Journal of Agricultural Economics*, 28 (4):105-114.
- Thorbeeke, E. (1992): *The Anatomy of Agricultural Developing Countries*, Institute for Policy Reform, Washington D.C. Working paper No. 43. p61.
- Tomek, W. G. and Robinson, K. L. (1981): *Agricultural product prices*, Second Edition, Ithaca, New York, U.S.A. Cornell University Press, 51pp.
- Turner, J. (2004): *Spices: The History of Temptation*. London, Vintage Books. p30.