A STUDY ON WORKING OF MODERN AND TRADITIONAL RETAIL OUTLETS: A COMPARATIVE ANALYSIS

Thesis submitted to the
University of Agricultural Sciences, Dharwad
in partial fulfillment of the requirement for the
Degree of

MASTER OF BUSINESS ADMINISTRATION

IN

AGRIBUSINESS

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JULY, 2008

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1. INTRODUCTION

Retailing encompasses the business activities involving goods and services to their consumers for their personal family / household use. Retailing is the largest private industry in the world with total sales of US $ 6.6 trillion. The retail sectors play a significant role in the world economy because of the contribution that it makes to the economy of the country.

Retail, according to concise Oxford English Dictionary, is the 'sale of goods to the public for use or consumption rather than for resale'. Retailing is derived from the French word 'retailer' meaning 'breaking bulk', specifically, breaking bulk quantities into smaller saleable units. Usually, a retailer buys goods or products in larger quantities from manufacturers or importers, either directly or through a wholesaler and then sells individual items in small quantities to general public or the end users. As such, retailing is the last link that connects the individual consumer with the manufacturing and distribution chain.

The world over retail sector has been growing rapidly with increasing sophistication and modernization of the life-style of households and individuals and also with increasing globalization of trade. The retail sector has strong backward and forward linkages with other sectors like agriculture and industry through stimulating demand for goods and through mass marketing, packaging, storage and transport. Moreover, it creates considerable direct and indirect employment in the economy. Also, the consumers have benefited in terms of wide range of products available in a market.

The retail industry in India is of late often being hailed as one of the sunrise sectors in the economy. A.T. Kearney, the well known international management consultant, recently identified India as the second most attractive retail destination globally from among Thirty emergent markets.

The Retail sectors have become one of the most dynamic growing sectors in recent times. Retailing has always been an integral part of economic development. Nations with strong retail activity have enjoyed greater economic and social progress. It contributes to the development by matching the individual requirements of the population with the producers and suppliers of merchandise. By bringing the product to the customers, they are helpful in creation of demand of new offers leading to expansion of market. The Indian retail industry is not only one of the most fragmented in the world, but also the most challenging due to its unorganized nature.

The retail sector is broadly classified in to two groups; organized and unorganized retail sector. The organized retailing refers to trading activities undertaken by licensed retailers, that is, those who are registered for sale tax, income tax, etc. These include the corporate – backed hypermarkets and retail chains, and also privately owned large retail businesses. It is not just stocking and selling but is more about efficient supply chain management, developing vendor relationships, quality customer service, efficient merchandising and timely promotional campaigns. On the other hand the unorganized retailing refers to the traditional formats of low-cost retailing, for example, the local kirana shops, owner managed general stores, convenience stores, hand cart and pavement vendors, etc. This market is characterized by typically small retailers, more prone to tax evasion and lack of labour law supervision. This market is more common in developing countries.

1.1 Indian Grocery Retail Market

Grocery constitutes over 50 per cent of the Indian retail market and has an annual turnover of US $80 billion. There are estimated to be 6.5 million grocery outlets in the country in various shapes and sizes. Almost all of' these are unorganized and fragmented. The organized sector represents mere two per cent of the total grocery market in India and this is concentrated in urban locality. The pressures from the consumer demand and range proliferation are impacting the grocery in urban India today.

In the past there have been sporadic efforts by the government and the co-operative sector to develop modern formats. These include discount dry grocery shops like Super Bazaar in Delhi and Shakhari Bandar in Mumbai.

Numbers of traditional kirana stores are expanding to become super kiranas. New forms of stores are expanding to include customer walk through space and allow self-service shopping with touch and feel. Food World is the best example for this, where product categories include staples, fresh fruits, vegetables, dairy, bakery, frozen products, processed food, beverages, household cleaning products and general merchandise. The other example includes Subhiksha in Chennai and Bangalore.

1.2 Global Scenario of Retailing

Retail has played a major role world over in increasing their activity across a wide range of consumer goods and services. The impact can be seen in countries like U.S.A., U.K., Mexico, Thailand and more recently China. Economies of countries like Singapore, Malaysia, Hong Kong, Sri Lanka and Dubai are also heavily assisted by the retail sector.

Globally, retailing is a big business and its turnover accounts to US $ 6.6 trillion. The retail industry in America employs more than 22 million people and generates more than US$ 3.0 trillion in retail sale annually (*www.epwrf.res.in*). According to the India retail report 2005, the retail sales was found to be the highest in developed countries like U.S.A. and U.K., wherein 85 per cent of the retail sector was constituted by organized retailing due to 100 per cent foreign direct investment (FDI) and its contribution of nine per cent to GDP and more than 10 per cent employment in these countries (www.imagesretail.com/ india_retail_report.htm). The share of organized retail is more so in case of developed countries due to the busy life schedule and lack of time for shopping for the common man, high literacy rate, exposure to media, greater availability and penetration of variety of consumer goods into the interiors of the country and better shopping experience. Whereas, the share of organized retail outlets in developing countries was very less, it was 17 per cent in China and very meager, about Three per cent, in India because of the poor literacy rate, lack of exposure to media, non-availability and low penetration of consumer goods to rural areas of the country and lack of shopping experiences.

There are many Multi National Companies (MNCs) operating in the retail business throughout the world. The big four champions in 2004 were Wal-Mart, Carrefour, Home Depot and Target. Except Carrefour, which hailed from France, all three top champions were from U.S.A. The combined sales was US $ 438 billion and were growing at the rate of 10 per cent per annum, there growth came from putting small stores out of business. This is happening in Europe and Asia also in recent times. The Big Box and Hypermarket are operating everywhere. However, Germany based Metro is operating in 27 countries all over the world including India.

The traditional forms of independently owned small business and co-operative have lost significant market share in developed countries and the retail sector in these countries is now characterized by large multiple chains run by powerful and sophisticated organizations. In the globe, the recently existing retail formats are Hypermarkets, Supermarkets, Mass merchandisers, Discounters, Convenience stores, Specialty stores and Mom-and-pops. The evolving formats with their dealing category of goods and the examples of the type are shown below:

Hypermarkets – These are mainly located out of town covering an area over 40,000 Sq. ft, aiming at the monthly bulk shoppers. These markets have spacious parking lots and sell a variety of products such as electronic, clothing, durables and so on apart from groceries.

Supermarkets – It is mainly based on the classical self-service system. Its area varies from 4,000 to 20,000 Sq. ft. They mainly focus on one of the primary conditions of grocery, household goods, personal care etc.

Mass Merchandisers – The mass merchandisers have cross country chain operations. They have centralized sourcing hub, spiked distribution and sell almost everything at competitive prices.

Discounters – Aimed mainly at bargain buyers, they are different from supermarket. They offer less choice in each category; give discounts, cheap costs and inventories at lower level.

Convenience stores – They are located at convenient points like petrol stations that keep open day and night and sometimes do odd jobs for time starved customers (clothes, laundry, medicine prescription, pick up). They occupy a small area, usually less than 2,000 Sq. ft.

Specialty stores – These are moving towards 'consultative shopping'; where a salesman is well trained in offering specialized advice to customers before they purchase any commodity.

Mom-and-Pops – Traditional formats, these are very small (less than 1000 Sq. ft), and family owned corner shops.

1.3 Indian Scenario of Retailing

Retailing is one of the largest industry in India and second largest employer after agriculture. The retailing industry provides employment to over 18 million people. One out of every 25 families in India is engaged in the business of retailing. Ownership and management are predominantly family controlled. However, in sharp contrast to developed countries, unit average size of retail outlet in India is very small. It is the Tenth largest economy in the world based on GDP. The Indian retail sector is growing at compound average growth rate (CAGR) of 30 per cent over the next five years. However, the share of modern organized retail sector is likely to grow from its current Three percent to 15-20 per cent over the next decade. More than Eight per cent of the population is engaged in this activity. The Indian retail industry is valued at US $300 billion and is expected to grow to US $427 billion by 2010 and to US $637 billion by the end of 2015. The retail sector is expected to generate employment in excess of 20 lakhs by 2010 of which 5-6 lakhs will be in the organized sector. The country is rated as Fifth most attractive emerging retail sector and ranked second in a Global Retail Development Index of 30 developing countries as drawn up by A.T. Kearney.

Unlike most other countries, Indian retail sector is highly fragmented and bulk of the business is in the unorganized sector (97 per cent) like local 'wet' market vendors, roadside pushcart sellers or tiny kirana (grocery) stores. In India, the majority of food consumption is still at home. There are an estimated 12 million retail outlets, of which almost Seven million sell food and grocery products. The vast majority of these are small kiosks (17 per cent), general provision stores (14 per cent) and grocery stores (called kirana; 56 per cent of all rural retail outlets) run by a single trader and his family. With more than 71 per cent of the population living in small villages and engaged in agriculture, most of Indians still do their food shopping at small-scale vendors in the local village, or at large-scale weekly markets which are often serving several villages in one area, where small individual vendors trade. In the towns and cities, most consumers do their food shopping at the local neighborhood, independent small retailers, kiosks and street hawkers. (Anonymous, 2005).

Organized retailing accounts for only Three per cent in India, whereas it is 85 per cent in USA and U.K., 75 percent in Taiwan, 55 percent in Malaysia, 35 per cent in Korea and 20 per cent in China. The growth of retail sector in the country is tremendous, both in urban and rural areas. The country has witnessed a retail revolution in recent years. Significant development has been taking place in urban areas in the form of organized retailing , mega stores or malls, more so in the south of the country in the major cities of Bangalore, Chennai and Hyderabad, as well as New Delhi and Mumbai in the North. It is expected that the Tier II cities would take another five years to absorb modern retailing opportunities. Moreover, the case for Indian retailers to explore rural markets is also strong due to the size of rural population and agricultural income growth in last couple of years. The major formats being followed for organized food retailing in India are supermarkets, discount stores, fresh product outlets, specialty stores, convenience stores and off price retailers.

International attention is now increasingly focused on the rapidly growing Indian food retail market. With the removal of quantitative restrictions on imports, Indian consumers can have access to food from around the world. Market analysts believe that hypermarket will determine the future of organized food retailing over the short to medium term. Traditional grocers are also gradually redefining themselves by increasing floor space and introducing self-service format and value added services such as credit and home delivery (Anonymous, 2004).

Food retailing is one of the important part of the present organized retail industry in the world. Growing at a rate of 30 per cent, the Indian food retail is going to be a major driving force for the retail industry. The changing life styles, tastes and higher disposable income, growing need for convenience, etc. has revolutionalized the food retail scenario of the country and now it has become the largest segment of the retail sector of India.

After half a decade of unorganized activity and fragmented “Mom & Pop” stores, organized food retailing in India is developing rapidly, accounting for about 14 per cent of the total organized retail trade in the country. Although modern formats such as supermarkets and hypermarkets constitutes less than one per cent of the total food retailing, it is fast picking up to be the next major industry as India is experiencing a consumption boom driven by rising incomes, rapid urbanization, etc. The retail sales grew by 10.5 per cent in rupee terms in 2005. Since food accounts for over 60 per cent of the customers spending, food retailing has greater opportunity to grow.

1.4 Retailing in Karnataka

The study conducted by the Rabo India Finance Pvt. Ltd. says that south Indian states of Tamil Nadu, Andhra Pradesh and Karnataka have taken a lead role in establishing modern food outlets. The growth of organized retailing has shown particular vigour in Chennai and Bangalore, where an estimated 40 per cent of their grocery requirements are met through modern retail formats. The study pointed out that media exposure, nuclear families and emancipation of women are some of the important demographic reasons for the shift in the decision-making variables from price. The study also estimated that organized food retail sector is set to expand over Ten folds in the next five years to approximately Rs. 75 billion (US $1.6 billion). The estimate was based on the assumption that 6 million households would spend Rs. 1000 per month through organized retail.

Karnataka is one of the leading states in organized retailing in India as there are more than Ten organized retailers (firms) with more than 100 outlets including Metro AG operating in Bangalore city alone. Due to increasing urbanization and expanding service sectors like software, banking, insurance and business process outsourcing (BPO) in Bangalore, which has taken into a metropolitan city status more recently has led to increase in income of the consumers. Apart from Bangalore, cities such as Mysore, Mangalore and Hubli-Dharwad in Karnataka are also growing rapidly in terms of urbanization, income and organized retailing with local food marketers as they are converting unorganized retail outlets into organized form because of strong demand for convenience products; and better educated consumers concerned about health, nutrition, food safety, and the environment.

The establishment of Nilgiris super market way back in 1971 paved way for the starting of the food retail chains in Bangalore. As there were no new players entering for the next two decades, there was not much growth of food retail chains in Bangalore. But with the entry of Food World in 1996, there has been a rapid expansion of organized food retail chains in Bangalore with many new players like Fab Mall, Subiksha, Trinethra, Namdhari Fresh, Reliance Fresh, etc. entering the market and opening up their outlets in the city. The rapid rise in the super market chains can also be attributed to many international and national players showing interest in Bangalore to start their retail outlets.

Food and grocery items account for a significant 74 per cent of total retail sales across both the organized and unorganized sectors. The increasing competition and rising scale of organized retail distribution network are forcing the players to focus on restructuring of the supply chain to improve productivity and provide a better deal to customers.

Keeping these things in mind the present study was undertaken in Bangalore city with the following objectives.

1. To study the procurement and inventory management in modern and traditional retail outlet.
2. To analyze the investment pattern in modern and traditional retail outlets.
3. To study the costs in value addition made by retail outlets.
4. To study the cost and returns in the trade by retail outlets.
5. To identify the factors influencing consumer behavior in purchase made in retail outlets.

1.5 Limitation of the study

The study was purely based on the data given by the owners/executives of the retailing companies/outlets who are generally suspicious of the motives of any investigation because of fear of taxation and competition. Therefore, the investigation was confronted with various drawbacks in ascertaining the data. In case of companies having chain of

outlets/units, only one unit/outlet data was used to assess the overall objectives of the study. Hence, greater care was taken to collect the data as accurately as possible.

1.6 Presentation of the study

The entire study has been presented in Seven chapters.

Chapter I deals with the importance and the current status of the present study was highlighted. The specific objectives of the study as well as limitations of the study have also been indicated.

Chapter II deals with the review of the relevant research studies connected with the objectives.

Chapter III outlines briefly the main features of the study area and the study outlets. The nature and sources from which relevant data have been collected and the various statistical tools and techniques employed in the study for evaluating the objectives were included.

Chapter IV is devoted to the analysis of the data through a variety of tables into which relevant details have been compressed and summarized under appropriate heads and presented in the tables.

Chapter V provides the causal relationship between certain variables and the outcome which they produced.

Chapter VI briefs the summary of the main findings along with the policy implications that emerged from the findings of the study.

Chapter VII, the final chapter list the references cited while undertaking the research.

2. REVIEW OF LITERATURE

To undertake any study, to look at the previous studies done in the field is of utmost importance. Review of literature would provide a navigation to researcher to take the research work in desired direction. The review of the work done by post researchers in the field are presented under the following heads.

2.1 Procurement and inventory management in modern and traditional retail outlet.

2.2 Investment pattern in retail outlets.

2.3 Costs in value addition made by retail outlets.

2.4 Cost and Returns in retail trade.

2.5 Factors influencing consumer behavior to purchase in retail outlets.

2.1 Procurement and inventory management in modern and traditional retail outlets

Dalvi (1989) in his study on processing and marketing of cashew nut in Sindudurg district of Maharashtra concluded that the wholesale dealers, commission agents and farmer growers are the three main sources of procurement of raw materials. The processing units purchase about 48, 17 and 39 per cent of their raw materials, respectively from the wholesale dealer, commission agents and farmer growers.

Amrutha (1994) in her study on processing of paddy in Chitradurga and Dharwad districts revealed that the total cost of procurement by an average size rice mill was Rs. 20.83 per quintal, of which Rs. 10.50 (50.63%) was spent on transportation which was found to be minimum. The market fee and commission charges accounted for 37.59 per cent of the total cost.

Malleshwari (1996) examined the potential infrastructure and constraints of mango processing in Andhra Pradesh. The study showed that mainly three varieties of mango were used for manufacture of pulp viz., Totapuri, Alphanso and Raspuri. Roughly 55 per cent of pulp was made from Totapuri, 35 per cent from Alphanso and the rest from other varieties of mango in the processing units of Chittor district. Mangoes were purchased both from the markets as well as from the farmers directly.

Ballappa (1997) in his study production, marketing and processing of red gram in Gulbarga district revealed that the purchase price of red gram by the dal miller was Rs. 1881.27 per quintal and the sale price was Rs. 2277.04 per quintal, of which the cost incurred for purchasing red gram was Rs. 81.27 per quintal.

Bouvier (1998) in his study on contractual forms between retailers and their suppliers in the food sector reported that vertical integration and contractual relations are the two main features of the French food-retailing sector. The economic weights of these are more or less similar. However, in the long run it seems that (a) the contractual side is more important than the integrated one and that (b) contractual forms related to high quality tend now to be dominant.

Patil (1998) in her study on performance evaluation of fruit and vegetable processing units in north Karnataka observed that out of the total quantity of raw material purchased the major share was of fresh fruit and vegetables in case of both the private sector and co-operative sector processing units. The quality of fruits and vegetables purchased by private sector units was comparatively high (valued at 8.37 lakhs), than that of co-operative sector unit (valued at Rs. 6.22 lakhs).

Dev (1998) in his study on management appraisal of cashew nut processing industries in Uttara Kannada revealed that overall, total cost of cashew nut procurement was Rs. 324.16 per quintal. The total cost of procurement per quintal worked out to be higher through interstate imports – processor at Rs. 434.41 followed by grower-traders-processor

growers, small dealers – processor, growers, processors and international imports processor at Rs. 379.63, Rs. 342.45, Rs. 323.33 and Rs. 299.99 per quintal, respectively.

Shobha (1998) in her study on performance of fruit and vegetable processing units in co-operative and private sector in Uttara Kannada district found that the private sector processing unit procured fruits and vegetables to the tune of 187.098 metric tones values at Rs. 8.37 lakhs. The procurement of fruits and vegetables by the co-operative sector unit was 161 metric tones values at Rs. 6.22 lakhs. Fresh fruits and vegetables accounted for 12.42 per cent of the total raw materials purchased.

Veena and Tajinder (2000) has studied performance analysis of Bhogpur and Jargoan sugar mills in Punjab. The procurement pattern of these two sugar mills, the Jargaon mill crushed 2238.67 thousand tones of sugarcane and produced 191.93 thousand tones of sugar. Thus, the quantity of cane crushed and production of sugar were higher for Jargoan mill compared to the Bhogpur sugar mill. The quantity of cane crushed and the quantum of sugar production was higher by the Jargoan mill by 38 and 35 per cent, respectively. The percentage recovery of sugar for Jargoan mill was 8.38 being lower compared with 8.57 for the Bhogpur sugar mill.

Woods *et al.* (2000) examined the supply chain concept for horticultural products which were characterized by perishability, heterogeneity and lags in production response to market signals, producer's profits were vulnerable to quantity, timing of supply and product specification. Many supply chains in smaller industries were loose, fragmented, interwoven, unstable and unique. Hence, he suggested the firms operating within these environments need an acute understanding of the chains, the hierarchy of channel members and their relative position. Effective business strategies for individual firms and supply chains need to be developed and redeveloped to accommodate the dynamic nature of horticulture.

Lehtinen *et al.* (2002) in their study on contract manufacturing in Finnish food industry, found that in the future, direct deliveries from the contract manufacturer to retail stores will increase, the delivery times will shorten and thus, more flexibility is needed from the contract manufacturer.

Weindlmaier *et al.* (2002) conducted a survey in the Bavarian (Germany) food industry (with 153 respondents). The study showed that from the point of view of the processors, in the near future quality management system in agricultural firm might be a pre-requisite to deliver raw materials to the food industry.

Narayana Reddy (2004) in his study reported that most (61%) of the retailers get their requirements from wholesalers, 15 per cent from the large and other retailers. Over 17 per cent of the selected retailers get their goods from more than one source, but a small percentage of retailers get some of their requirements from producers. From the point of view of the terms of supply 67 per cent of retailers get their requirements by paying cash. Only 13 per cent of the retailers get their requirements on credit and 19 per cent get credit partly from the suppliers. Apart from this, the study also shows that the organized retailers/hyper malls and super marketers get wholesales' margin plus concession as they buy in bulk from the producers.

Anonymous (2006) reported that in USA food retailing, labour was the largest single marketing cost, accounting for half the industry's expenses beyond the farm. Food retailers employ more than 3.5 million workers. The industry's next highest costs were for packaging (8.0%), and transportation and energy (a combined 7.5%). Recent trends such as high energy costs and the rising demand for more convenient packaging have increased all these expenses.

McCool (1996) study described the challenges that make inventory management a problematic issue for in-flight caterers' financial management practices. In-flight kitchens are a logistics operation, and effective inventory management and detailed product usage controls were essential for overall cost control. They were most efficiently operated as large production food factories with assembly line production of passenger trays. The different requirements of individual airlines, which may have an account with the caterer, add considerably to the caterer's costs and must be reflected in the pricing offered to the airlines. A pricing system was developed which eliminates product food cost as the basis of pricing and which places new emphasis on actual labour requirements to produce, package, store

and distribute the products and menu items selected by each airline.

Dev (1998) in his study on cashewnut processing units in Uttar Kannada district of Karnataka found that storage cost, cost of maintaining the stock and interest on investment carrying the inventories as the main components of cost of inventory management. Further, he observed that the total per quintal costs on carrying the inventory to be about Rs. 536.42, Rs. 558.33 and Rs. 545.60 for small, medium and large units, respectively. In overall inventory carrying cost, about 99.73 per cent was contributed by interest on inventory capital and remaining 0.27 per cent was contributed by storage cost and stock maintenance cost put together.

Kamat (1999) in his study on different strategies for inventory management opined that demand forecasting and just-in-time method were helpful in reducing the inventories in store, sales and in process. Further, he also stated that the demand forecasting strategy can be executed within 14 to 21 weeks while the just-in-time strategy can be executed within 5 to 10 weeks. The study also give a general conclusion that the costs associated with inventory management can be attacked only with the help of proper and long-term strategies particularly in the field of supply chain management.

Bhattacharjee (1999) in his study on strategies for supply chain management by Hindustan Lever Ltd. (HLL) in India found that on an average about 20 to 24 per cent of turnover to be located in as inventories annually in the traditional strategy for the supply chain management. Further, she also stated that to overcome this problem, the HLL came out with a net strategy of 'zero' working capital and near zero stock, which ultimately led to reduction in inventories located into a mere 5 to 6 per cent from the earlier 22 to 24 per cent of annual turnover.

Chandrashekar (1999) in his study on estimation of storage costs for a multicrore, multi product and multi locational firm found that there existed three different systems of storage namely company owned, company leased and dealer owned warehousing facilities. Of these three different facilities, he found that dealer owned system to be the cheapest and the company owned system to be the costliest facility.

Sarkar (1999) suggested a pull type inventory management strategy equipped with automatic replenishment system and made for an order kind of system over the traditional push type to cut down the costs associated with inventory management.

Ashraf Ali (2000) in his study on business performance of co-operative oil mills observed that the interest on capital locked in carrying the inventory, store maintenance and storage costs and material losses were the major components in the overall cost of the inventory management for both large and medium scale units.

Lichtenberg and Zilberman (2000) developed a model to examine storage technology choices in the inventory management of commodities that are relatively highly perishables, and their impacts on resource allocation, prices, the environment, and the economic welfare of consumers or producers. The model was used to derive the socially optimal level of spoilage reducing input use and to examine the effects of alternative policies for addressing environmental damage on supply, market equilibrium and consumer and producer incomes. It was shown that storage technology choices affect total output as well as the temporal distribution of supply, consumption, and prices.

Vickener *et al.* (2002) found that investment in supply chain management technology in US food industry was extensive, particularly so in the restaurant or food–away-from–home (FAFH) sub sector. From 1980 to 1995, inventory turns in the restaurant sub sector have effectively doubled, increasing from 26 to 51 per cent. This means FAFH inventories were entirely replenished once a week, down from the 14 days supply maintained two decades ago. Over the same period, total market capitalization grew at a compounded annual growth rate of 17per cent from $ 5 to $53 billion. Based on the co-integration model estimated, they found that for every one unit increase in inventory turnover, market capitalization increased by $479 million in the FAFH industry over the analysis period. Thus, the equity capital market places a premium on the efficient management of inventories in the food system and rewards those firms that develop, adopt and implement supply chain technologies.

Farsad and LeBruto (2003) reported that the consequences of overstocking items or under stocking were undesirable. Overstocks absorb money and invite waste. Under stocks risk disappointing customers with unavailable menu items or add to food costs by requiring emergency runs to the cash and carry. Through analysis of daily item use and an application of risk, managers could calculate when to reorder; that is, when there is sufficient stock to cover typical demand until the next delivery. To account for unexpected demand, some safety stock must be included (by calculating the standard deviation of each day's use for the past time period, say, a week, and factoring that with the Z score of the service-level probability that management is willing to absorb). By factoring the lead time (delivery and food-preparation), the standard deviation of the usage, and the acceptable probability of a stock out, managers can use a formula to determine precisely when to reorder.

Nein PiChu and Roan ShiiWen (2004) reported that as computers are more and more widely used in livestock production and farmers manufacturing their own feed were growing more popular in Taiwan. This study was conducted to design a package which included simple feed formulation and ingredient inventory management to meet the farmers' needs. The inventory management system could facilitate the managers in monitoring the inventory to make the most effective adjustment and usage of the ingredients. The managers could, therefore, load their ingredients at the right time to avoid wastage and to reduce their ingredient costs.

2.2 Investment Pattern in Retail Outlets

Muralidharan (1981) compared the establishment costs of three processing units namely sugar, gur and khandsari units in Mandya district of Karnataka. He found that establishment cost of the three units to be in the order of Rs. 4, 40, 28, 322.03 lakhs for sugar units, Rs. 46, 329.83 lakhs for gur unit and Rs. 9, 16, 722.38 lakhs for khandsari unit.

Ipte and Borude (1982) studied on the economics of marketing and processing of cashew nut in Ratnagiri/ Sindhurdurga districts of Maharashtra state observed that capital investment in different groups of factories was Rs. 18, 54,710 lakhs of which 12.96 per cent was fixed capital. The important items of fixed capital were investments on building and roasting machinery, while the items of working capital were raw nuts, wages and salaries, fuel, containers, packing and packaging. The capital investment was lowest (Rs. 5.21 lakhs) in small factories and highest (Rs. 71.70 lakhs) in large size factories. It was also found that there was positive relationship between the size of the factory and capital invested.

Srivastava (1989) indicated that with subsequent secondary and tertiary processing of various raw materials, the value added as well as the price of finished products would be increased. He observed that agro-processing units' accounted for 39 per cent of all factories (agro-based and non-agro-based industries), 12 per cent of fixed capital, 13 per cent of working capital and 15 per cent of total capital employed in the industry in the organized sector. This 15 per cent of capital investment generated 25 per cent of the total employment, 26 per cent of the output and 21 per cent of the net value added. He noticed that capital productivity in agro-industries was 0.35, while labour productivity was less than half when compared to non-agro based industries.

Nagesh (1990) in his study on investment in production and marketing of cashew in Karnataka, indicated that the capital investment was the highest in building (72.81%) followed by machinery and equipments (15.42%) and land (11.77%) at an overall level of the units. Further, it was observed that the processing units utilized only 55.80per cent of their capacity.

Singh *et al.* (1994) while studying the economics of marketing and processing of pulses in Bundelkhand region (Uttar Pradesh), estimated that of the total cost, land/building accounted for the highest share being (51.97%) followed by machinery and equipment (40%), electricity fitting (4.72%) and other fixed capitals (3.31%) in arhar processing plant. In case of grain processing unit land/building, machinery, electricity and other fixed capital accounted for 50.26, 42.19, 4.77 and 2.78 per cent, respectively.

Maurya *et al.* (1995) in their study on economics of production and processing of Aonla in Varanasi district of Uttar Pradesh worked out the cost of Aonla processing plant and its establishment. The total establishment cost (fixed cost) per quintal was Rs. 8.00. It was the highest for depreciation, (Rs. 3.40/q) followed by interest on fixed capital (Rs. 2.50/q),

insurance (Rs. 1.00/q), maintenance cost (Rs. 0.60/q) and electricity and water charges (Rs. 0.50/q).

Kalse *et al.* (1996) found that the initial investment for the establishment of oil industries, dhal mills and cotton ginning industries was Rs. 3.19 lakh and 5.63 lakh respectively. The cost of machinery was the major item contributing 61.43 and 59.12 per cent in dhal mill and cotton ginning industry respectively. The average capacity utilization of oil industry, dhal mill & cotton ginning industry was only 41.67, 71.20 and 47.79 per cent, respectively.

Rachhpal and Darshan (1996) conducted the study to examine performance of co-operative sector infrastructure in Punjab market canneries. The study showed that the gross value of the fixed assets stood at Rs. 152.77 lakhs. The depreciation accumulated was Rs 92.13 lakhs. The present value of fixed assets was computed at Rs. 60.64 lakhs.

Sakia and Talukdar (1996) studied the economic potentialities of commercial processing firms at farm level for major spices in Nagon district of Assam. It was observed that the average capital investments in commercial processing units were Rs. 1.20 lakh, Rs. 0.94 lakh and Rs. 0.78 lakh and investment in machinery and equipment shared the highest followed by opportunity cost of own land.

Dev (1998) in his study on management appraisal of cashew processing industry in Uttar Kannada and found that the total capital investment directly varied with the size of the unit. Further, he concluded that the total capital investment was Rs. 117.5 lakhs for large scale units and 36.32 lakhs for small scale units, wherein the marketing capital accounted for about 25 per cent of the total capital investment with the majority of the fixed capital investment of about (80 per cent) was in building and machinery.

Joshi *et al.* (1999) studied the capital investment in the home, cottage, small and large scale of mango pulp processing units. Fixed capital accounted for 1.01, 1.6, 1.8 and 20.7 lakhs and the working capital was 2.25, 11.35, 4.34 and 21.03 lakhs, respectively. The working capital was of more proportion than fixed capital in all the categories. Analysis also indicated processing of mango pulp was more economical as indicated by higher scale efficiency than all the other categories.

2.3 Cost in Value Addition made by retail outlet

Muralidharan (1981) compared the processing of sugarcane into sugar, gur and khandsari on Mandya district of Karnataka. It was found that the processing cost per quintal was Rs. 70.51, Rs. 43.05 and Rs. 116.66 for sugar, gur and Khandasari, respectively. Share of fixed cost in the total processing cost was 64.24 per cent in sugar units, 30.78 per cent in gur units and 17.29 per cent in case of khandasari units. Whereas, variable cost formed 35.76, 69.22 and 82.71 per cent for sugar, gur and khandasari, respectively.

Ipte and Borude (1982) in their study on economics of marketing and processing of cashewnut in Ratnagiri/Sindhudurg district of Maharashtra found that the per quintal cost of processing worked out to Rs. 161.42. The major items of cost were the container (14.44%), labour (21.92%) and interest on capital (46.03%). The value addition due to processing of raw nuts was Rs. 350.72 per quintal which worked out to 52.66 per cent.

Singh and Ali (1985) studied economics of mustard and rapeseed marketing in the western region of Uttara Pradesh. They found that the cost of processing was Rs. 20.98 per quintal. They suggested for establishment of expellers in co-operative basis.

Hassan and Raghuram (1987) in their study on cashew processing and marketing in Prakasam district of Andhra Pradesh observed that drying of nuts, roasting of nuts, shelling of nuts, drying of shelled kernels, peeling of kernels, grading of kernels, conditioning of graded kernels and packing of graded kernels were the major stages in processing. The study reported that 80 kg of raw nuts when processed resulted in 22 kg of kernels (28% recovery). The processor incurred Rs. 87.06 as processing cost of which labour constituted 56.6 per cent and material cost stood at 42.5 per cent. Within the labour cost shelling accounted for higher proportion followed by peeling.

Verma (1989) studied the economics of processing and marketing of gur in Indore (Madhya Pradesh) and found that the average cost of processing of sugarcane under power

kohlu units of gur was Rs 6.80 per quintal. Further it revealed that the cost of processing varied from mill to mill according to the level of capital investment, power and sugarcane crushed during the year.

Hemachand (1989) in his study on economics of processing units of arhar pulse in Narasighaper district (Madhya Pradesh) revealed that the fixed and variable costs accounted for 45 per cent and 55 per cent, respectively. The costs of processing of arhar dal worked out to Rs 61.62per quintal.

Nagesh (1990) in his study on investment in production and marketing of cashew of Karnataka found that the overall cost of processing per quintal of raw nuts worked out to Rs. 553.54, out of which interest on capital itself formed 53.62 per cent of the total cost. This was followed by wages for piece rate workers (20.36%). The costs incurred on other items like administrative, overheads, salaries, depreciations, utilities, factory overheads and cost of packing material were found to be the least. The overall cost of production of kernels was found to be Rs. 1976.55 per quintal of raw nuts processed. The cost of raw material (Cashewnut) was the major component in cost of production of kernels accounting 71.99 per cent (Rs. 1423.01) of total cost.

Dalvi *et al.* (1992) studied economics of processing of cashewnut in Sindhudurg district of Maharashtra state and found that the cost of processing per quintal of cashewnut was Rs. 331.35 at an overall level. Out of the total cost, the major cost was the interest on fixed and working capital, accounting Rs. 21.55 (6.51%) and Rs. 148.16 (44.72%), respectively. The other items of costs were labour (13.74%) and tin containers (15.84%). The overall gross increase in the value of nuts worked out to Rs. 500.70 (45.96%) per tin and net increase was Rs. 174.50. Net added value worked out to 29.64 per cent. This was possible due to processing of raw nuts.

Venkatsheshaiah (1992) in his comparative study on groundnut processing units in three different categories *viz*, 3-chamber, 2-chamber and baby-expeller oil mill noted that the per quintal total processing costs amounted to Rs 2696.18, Rs 2606.13 and 2536.126 for baby expeller, 2-chamber and 3-chamber oil mills respectively. The average processing cost for these three categories amounted to Rs 2551.32 per quintal. Further he revealed that of the total processing cost (average) total fixed costs accounted for about 0.53 per cent while the total variable costs accounted for about 99.47 per cent. The fixed cost was comprised of salaries, depreciation and interest costs while the variable cost was comprised of raw material, labour wages, power and fuel packaging and incidental charges.

Singh *et al.* (1994) in a study on economics of marketing and processing of pulses in Banda district (Uttar Pradesh) observed that per quintal cost of processing of arhar, gram, and lentil was Rs. 831.67, Rs. 823.47 and Rs. 752.05, respectively.

Balasubramanian *et al.* (1996) in their study on pricing and transaction trend of raw cashewnut in India observed that the cost of production of kernel per quintal of cashewnut was maximum on raw cashewnut (70%) followed by processing labour (10.50%), purchase tax (5%), handling charges (5%), packing material (4.50%) and so on. The minor item of costs were transportation cost, fuels, factory overhead, administrative overhead and depreciation (0.10% each).

The study indicated different stages of processing for different commodities, percentage of value addition and the cost of production of finished products. The cost of production consists of the cost of raw material, which is a major item of cost accounted up to 75per cent, interest on working capital and fixed capital (wages, salaries, packing material) and other miscellaneous costs. However, researcher did not clearly delineate the different costs incurred in processing.

Gajanan and Subrahmanyam (2001) studied the marketing and exports of lemongrass oil in Kerala. The processing involves filtration to remove sediments, moisture and blended for standardizing citral content, the processor observed shortage/loss of around one per cent during filtration of oil. The cost of processing of lemon grass oil was observed to be Rs 4.70 per kg.

Kumar *et al.* (2003) in examined the Indian research efforts in vegetable crops, new niches for vegetable production, and the impact of pest management research. It was

indicated that the ongoing research programmes on vegetables addressing many emerging challenges, there is a wide scope for innovative improvements and a sharper focus on vegetable processing, value addition and quality control.

2.4 Cost and Returns in retail Trade

Veerkar (1988) conducted a study on economics of preservation of mango into different products in Ratnagiri district of Maharastra. The cost of preservation of one quintal Alphanso mango as pulp worked out to Rs971.26. The cost of preservation of one quintal local types of mango fruits into pickle, chutney and raw slices in brine worked out of Rs 557.48, Rs 861.00 and Rs151.28, respectively. The break even production analysis showed that the actual production handled in all the factories was more than break even point production.

Bawa and Kainth (1989) while analyzing the cost and return of rice milling industry in Amritsar district of Punjab, found that dehusking of one tonnes of paddy yielded a net profit of Rs 45.67. Expenses on raw material (86 per cent) constituted the major item. Running expenditure on machinery and repairs and maintenance costs constituted 1.96 per cent and 1.10 per cent, respectively. Net returns of the enterprise were 2.31 per cent of gross output.

Subramanyam and Sudha (1992) worked out the costs and returns associated with processing of one tonne finished product of tomato (ketchup). It was observed that the benefit: cost ratio was around 2.00 showing that processing is profitable. Raw material and packing were the two major items accounting for 67 per cent of the total variable cost of processing.

Singh *et al.* (1994) studied the economics of marketing and processing of pulses in Bundelkhand region (UP) and revealed that the average cost of processing per quintal including the cost of raw material worked out to Rs. 800.61. The processing cost of per quintal arhar, gram and lentil dal came to Rs. 831.67, Rs. 822.47 and Rs. 752.05, respectively.

Mourya *et al.* (1995) in their study on marketing of aonla and its product in varanasi district, indicated that the per quintal processing cost of morabba, pickle and chutney came to Rs 2198.80, Rs 1750.40 and 3233.80 respectively. The processing cost was highest for ional chutney and lowest for aonla pickle.

Ramamurthy (1995) studied the economics of hybrid cotton seed production in Coimbatore. The study revealed that the hybrid seed producer of Savitha received a net profit of Rs 2. 37 per rupee invested, where as the variety LRA (5166) seed producing farmers received a net profit of Rs 0.63 per rupee invested.

Raut *et al.* (1995) in his study on economic feasibility of straw berry cultivation in Nasik district of Maharashtra observed that, the per hectare total cost of production of straw berry was Rs. 4.27 lakh. Cost A accounted for 59.57 per cent of the total cost. Cost of runner (39.92%) and rental value of owned land (36%) were the important items of total cost. Per hectare gross income obtained from straw berry was to the tune of Rs. 10.23 lakhs.

Naik *et al*. (1996) studied economics of tomato seed production in Dharwad district. The study revealed that, the total cost of production per acre of tomato seed production increased with increase in the size of holdings. The total return from per acre of tomato seed production was Rs 45,800 for medium farmers, Rs 44,150 for small farmers and Rs.43,485 for large farmers. Net profit were highest in case of medium category (Rs.33,215) farmers, followed by small (Rs.32,465) and large (Rs.30,779) category farmers. This was due to lower cost of production and higher productivity in smaller sized firms' compared to the larger ones.

Prasher *et al.* (1996) in their study on economics of apple cultivation in tribal felt of North Western Himalayan region observed that the total cost of establishment of 1 ha apple orchard was Rs. 6.057. Of this orchard had to incur about 31 per cent on layout preparatory tillage and fencing, while cost incurred in digging of pits, purchase of seedlings and manures and fertilizers accounts for 14, 8 and 19 per cent, respectively. The maintenance cost varied between Rs. 6157 to Rs. 16878 per hectare, for various age groups. On an average, the net returns worked out were Rs. 2034 to Rs. 39755 per hectare for different age groups. The net returns were estimated to be high in the age group of 17-22 years whereas were lowest for plants of 19 – 22 years of age.

Srinivas *et al.* (1996) in their study on economics of processing of cashewnut in Andhra Pradesh indicated that the processors have to bear the processing cost of Rs. 124.22 per 80 kg of raw nuts, out of this total cost, raw material cost of Rs. 50.77 was incurred which formed 40.89 per cent and labour cost was Rs. 72.81 accounted to 58.61 per cent of total processing cost.

Dev (1998) in his study on management appraisal of cashew processing industry in Uttar Kannada district in Karnataka observed that cashew processing units at an overall level gained profits to the tune of Rs. 0.01/g that is Rs. 0.02 on every rupee of investment. Large processing units gained higher profits that is Rs. 0.04/g as compared to medium (Rs. 0.008/g) and small processing units (Rs. 0.06/g).

Joshi *et al.* (1999) revealed that economics of processing of mango pulp in home, cottage small and large units in south region of Maharashtra state. Total processing cost for a single tin (850 g) worked out to be in home, cottage, small and large scale units were Rs. 47.13, Rs. 41.95, Rs. 42.58 and Rs. 33.70. With in different categories the cost of processing was maximum in home scale and minimum in large scale units. The profit per tin remained at Rs. 4.78 in home scale, Rs. 6.89 in cottage, Rs. 5.59 in small and Rs. 13.32 in large scale units with overall net profit of Rs. 12.28. Cost and return indicated that processing of mango pulp was profitable as indicated by input ratio, which was greater than unity.

Kakadia *et al.* (1999) in their study on cost and returns of guava production in south Sourashtra zone of Gujarat, observed that on an average the total establishment cost per hectare of guava was Rs. 22862.98. The average materials cost contributed the maximum in total establishment cost of guava crop followed by rental value of land and labour cost. The average annual amortization cost was Rs. 3938.42 per hectare in guava orchard, while the per hectare average maintenance cost was Rs. 15265.83.

Mohapatra (1999) in his study on production and marketing of onion in Bolangir district of Orissa observed that the average cost of cultivation of onion per hectare was Rs. 17949.00. The cost of production of onion was worked out to Rs. 97 per quintal. Among various components of operational costs, human labour accounted for more than 33 per cent of the total cost, followed by expenditure on manures and fertilizers (16.66%), seeds (11.10%), plant protection chemicals (3.96%) and bullock labour (6.94%), total fixed cost constituted 17.16 per cent of the total cost of cultivation of onion crop.

Farooqi *et al.* (2000) in their study had worked out the economics of Rosemary cultivation at Bangalore and found that the cost of establishment was Rs 64,400 and the average cost of maintenance was Rs.19,400 per ha per year. It was revealed from the study that expenditure on the planting material (Rs 50,000) was the single largest item. It was also revealed that expenditure on distillation (Rs.4000), fertilizers(Rs.4000), plant protection (Rs.3000) and harvesting (Rs.2000) were the main items in the maintenance cost of Rosemary cultivation.

Jayalakshmy and Abdul (2000) conducted study on cost of establishment and cost of production of cashew apple syrup in Kerala state. On an average, 750 bottles of syrup can be obtained from one tonne of cashew apple. The extracted juice can be preserved for syrup production during the off season as well. The cost involved (the labour and inputs) for processing of one tonne of cashew apple is Rs 1940. A minimum of 750 bottle of cashew apple syrup can be obtained from one tonne of cashew apple. This works out to a cost of Rs 25.80 per bottle. Of the total cost, 85 per cent forms the input cost (Chemical, bottle, sugar etc.) and 15 per cent forms the lobour cost. The price of apple and interest towards non-recurring cost is not included. At sale price of Rs 40 per bottle, the net profit per bottle was Rs.14.20.

Veena and Tajinder (2000) had studied the performance analysis of Bhogpur and Jargoan sugar mills of Ludhiana district in Punjab. They found that production cost of sugar in Bhogpur sugar mill was Rs.12.37 per kg and Rs 9.89 per kg in Jargon sugar mill. Expenses on raw material was the major item 77.2 par cent and 82.86 per cent of other expenses including manufacturing expenses and maintenance were 22.78 and 17.12 per cent, respectively. Gross profit was Rs 2.67 per kg at Jargoan mill and Rs 0.58 per kg at Bhogpur mill. Lower per unit cost coupled with relatively higher sales increased the profitability of the Jargoan sugar mill tremendously; it was Rs.2.69 per kg compared to only 58 paise per kg for the Bhogpur mill.

Deshmukh *et al.* (2001) their study stated that the annual net return of mushrooms production were estimated by considering four crops per year. The annual net return obtained were Rs.1314.72, Rs, 4998.84 and Rs.39014.60, respectively for small, medium and large sized units. The benefit cost ratio of mushroom production for small, medium and large sized units was 1.35, 1.86 and 3.09 respectively showing all groups of farms were economically viable enterprises. However in size of production unit, the productivity of small, medium and large sized farms were 33.17 kg, 67.97 kg and 79.67 kg per crop respectively. This study suggested that, net return and size of mushroom production unit had positive relationship i.e. as the farm size increased, profitability also increased and vice versa.

Singh *et al.* (2001) in their study on pattern of production and marketing of fruit crop in Punjab estimated the total annual cost of cultivation of grape, guava and peer was Rs.26,547.09 per hectare, Rs.22,381.22 per hectare and Rs. 24,176.47 Per hectare respectively.

2.5 Factors Influencing Consumer Behaviour to Purchase in Retail Outlets

Rees (1992) in his study revealed that factors influencing the consumer's choice of food are complex and must be added to variables such as flavor, texture, appearance, advertising etc. Demographic and household role changes and the introduction of microwave ovens have produced changes in eating habits, a reduction in traditional cooking, fragmentation of family means and an increase in 'snacking'. The vigorous sale of chilled and other prepared foods is related to the large numbers of working wives and single people, who require and value convenience. Developments in retailing with concentration of 80per cent of food sales in supermarkets, is also important. Consumers are responding to messages about safety and healthy eating they are concerned about the way in which food is produced and want safe, 'natural', high quality food at an appropriate price.

Kainth (1994) in his study on "Consumption of Apples: Consumer's towards view pattern and determinants" used ranking techniques to understand consumer preference for apples in different income groups. He also used linear multi-variate regression to analyze the factors affecting apple consumption.

Ragavan (1994) reported that quality, regular availability, price, accuracy in weighing and billing, range of vegetables and accessibility as the factors in the order of importance which had influenced purchase of vegetables by respondents from modern retail outlets.

Hugar and Vijay Kumar (1996) carried out a study in Dharwad city to identify various factors that influence the consumption of vegetables. A sample of 90 consumers was chosen at random. It was observed that the personal attributes such as educational level and sex had significant influence on the quantity and frequency of purchase. Price had a high influence on quantity purchased among the lower income group but the effect was not pronounced for high income groups.

Sundar (1997) study revealed that the Grocery Department of Saravana Bava cooperative supermarket, Cuddalore was enjoying favourable images of consumers in the attributes such as equality of price, behaviour of sales persons, moving space, location, correctness of weight, packaging of goods, number of sales persons and convenient shopping hours. At the same time, the image is weak in the attributes such as quality of goods, availability of range of products, variety of goods, acceptance of returns, credit facility, and door delivery and in sales promotional measures.

Chung *et al.* (1998) study revealed the factors influencing the furniture retailer purchasing decisions in Taiwan. Important factors of the furniture producers in choosing distribution channel were production capacity, salesmanship, type and grade of the products, transportation and storage. Many distribution channels were available to the producers. The retailers were under pressure to reconsider their management style and marketing strategy in order to obtain more profit. The most important business concerns to the retailers were the product quality and the number of locations selling the same furniture. The salesman in the furniture business agreed that education and training were very important, with 96.70 per cent of the retailers believing that service metality was the most important requirement for salesman. The factors influencing the retailers decision to purchase furniture were product

quality (100%), style of finishing (100%), special functions (90%), assembly functions (90%), cheap price (90%) and the reputation of suppliers (90%).

Sanjaya *et al* (2000) in their study on buying behaviour for branded fine rice in Chennai and Coimbatore city observed that the quality and image of the brand were important factor for proffering it and also noted that price was not the most important factor for the affluent people in both cities.

Burke (2001) has created a brand equity index comprised of three components, best described as brand equity molecule, which is overarching device of brand equity molecule, which is overarching device of retaining and attracting customers. The three atoms which embedded to molecule were (i) image, (ii) value and (iii) loyalty. Image and value perceptions pull in new customers while loyalty and value retain customer.

Sharma and Jaglekar (2001) surveyed 4000 households in the area of Godavari – Co-operative dairy (GCD) in Rajahmundry, Andhra Pradesh. One of the main purpose of this survey was to ascertain the attitudes of consumers towards quality of dairy milk. The results revealed that more than 59 per cent of the families expressed that the milk supplied by the GDC was of medium quality. About 32 per cent of the families consider that the milk was primarily judged on the basis of level of content.

Nandagopal and Chinnaiyan (2002) conducted a study on brand preference of soft drinks in rural Tamil Nadu using Garrets ranking techniques to rank factors influencing the soft drinks preffered by rural consumers. They found that the product quality was ranked as first followed by retail price. Good quality was ranked as first followed by retail price. Good quality and availability were the main factors which influence the rural consumers of a particular brand of a product.

Devlin *et al.* (2003) conducted a study on means-end chain analysis of the food sector and explored the extent to which the findings made can be used to inform the retail positioning strategy of food retailers in the UK, using data obtained from 15 respondents. Using means-end theory as the theoretical underpinning of the study, the study employed laddering methodology to identify the linkages between food retail store attributes and personal values. The findings of the study presented a more personally relevant representation of consumer's perceptual orientations towards food retail store image. At the attribute level "good quality products", "good reputation", "store has additional services", and "value for money", are most sought after. These were linked to the consequences "feel good" and to "save time". Overall, the findings support previous value driven research, concluding that "happiness" and "quality of life" were the most strived for personal values.

Cavard and Moreau (2003) undertook a survey among 2000 French consumers in 2002 to study their behaviour regarding the purchase of fruit and vegetables. It first appraised purchasing frequency; the weekly purchase being prevalent. Regarding places of purchase, supermarkets come first, followed closely by markets. In terms of modes of purchase, the self service with assisted weighing was the preferred option. Consumer expectations concern better control of labelling and quality on the selling place, with an indication of consumed-by date. The main consumers, the old-aged people, appear, however, to be less concerned with this additional information.

Michels *et al.* (2003) study revealed that almost all food retailers in Germany sold organic products, fresh ones being estimated at 45per cent of the turnover. Surveys indicated that 49.7per cent of households bought fresh products, principally vegetables, at least once between April and December 2002. Vegetables, fruit, potatoes, and eggs were the main categories on offer in supermarket-type outlets; specialist whole food shops and producers' direct marketing enterprises carried a wider range of produce including meat. Some 77per cent of turnover by the larger retailers was from sales to regular purchasers. Average frequency of purchasing, however, was not over Fie times in Nine months. Younger customers tended to buy from specialist outlets rather than supermarkets.

Manivannan and Raghunanthan (2004) observed that there was no close relationship between the age, sex, education, occupation and extend of utilizing departmental stores where as income alone had shown a close relationship with the extent of utilizing departmental store at 1per cent significant level, which shows that there was a close relationship between income and extent of utilizing department stores.

Kinsey *et al.* (2004) in his study identified seven forces that had converged to create a demand-driven food system in the USA were (1) more diverse consumer characteristics and tastes; (2) the universal product code (bar code) and all the information technology that followed; (3) Wal-Mart (biggest food retailer in the world), the early adopter of information technology and the mother of efficient supply chain management; (4) efficient consumer response, a defensive response to Wal-Mart's expansion; (5) Concentration of retail ownerships; (6) global concentration of food processing and manufacturing; and (7) new business models.

Sezen (2004) conducted a study on the pricing strategy for perishable products, found that consumers were less likely to purchase perishable goods when their expiry dates are near. For this reason, retailers frequently implement a discount pricing policy when the products have reached closer to their expiry dates. Thus the retailers tend to gain by reducing losses due to spoilage of goods.

McLaughten (2004) in the study of the dynamics of fresh fruits and vegetable pricing in the super market channel, he concluded that major factor that contribute to the complicated price formation process, of several levels, of fruit and vegetables in the US were marketing channels, market structure changes, pricing techniques and promotional impacts, retail responses to supply changes, and price versus value.

Haese *et al.* (2005) study revealed that since late 1990s, the number of supermarkets in South Africa has been steadily growing. Due to a more effective and efficient management and procurement system, the supermarkets can benefit from economics of scale and sell food at a relative low price. In their study they presented a case study of two villages in the Transkei area of South Africa. In these poor rural communities, the majority of households now buy their main food items from supermarkets rather than from local shops and farmers. While presenting an important step towards livelihood development and food security, these supermarkets also form a strong competitor for local agricultural sales. The supermarkets provide many food items at lower prices. With an increase in income, the households look for variety and exoticism in their food products, and will most likely find this in the supermarkets, rather than the local stores.

Li Lan *et al.* (2006) conducted a study on Food retailers pricing and marketing strategies and found out that retail grocery chains were the dominant players in the vertical market channels for many commodities. Retailers through mechanism of vertical control exert a strong influence on upstream suppliers and determine the products offered in their stores. They also noted that large retailers posses some degree of oligopoly. The small scale producers' revenue decreases when retailers use promotional sales as a selling strategy although the consumers were benefited.

Rajesh Shinde (2007) in his study on recent facets of consumer behaviour in two villages of Aurangabad District of Maharastra state observed that in the village Balanagar, 14 respondents (28%) reported that price factor was taken into account, 10 respondents (20%) reported that quality factor was more important for them, 8 respondents (16%) reported that availability was considered while purchasing, 18 respondents (36%) reported that small size was preferred while purchasing. In Pimpalwadi village 11respondents (22%) reported that price was an important factor while purchasing, 14 respondents (28%) reported that they prefer quality, 10 respondents (20%) reported that they purchased according to the availability of the product, 15 respondents (30%) reported that they had taken into account small size while purchasing the fast moving consumer goods (FMCG) product.

3. METHODOLOGY

In the process of achieving the objectives of the study, it is very important to follow a systematic scientific approach so as to present and interpret the results of the study or investigation conducted. This chapter is intended to present the climatic and economic feature of the study area, nature and source of data collected, analytical tools and techniques employed to evaluate the objectives of the present study.

These are presented under the following headings.

3.1 Description of the study area

3.2 Sampling design

3.3 Selection of the products

3.4 Nature and sources of data

3.5 Analytical tools and techniques employed

3.6 Definition of terms and concepts used in the study

3.1 Selection and Description of the Study Area

3.1.1 Selection of the study area

Bangalore, the capital city of Karnataka is one of the fastest growing metropolitan and is highly cosmopolitan in nature. People of different religions, castes, occupations, cultures, speaking diverse languages and of different food preferences reside here. It is the Information Technology and Bio-Technology hub of India, with industrial estates and numerous financial and educational institutions. Hence, the city was purposively selected for the study.

3.1.2 Description of the study area

Bangalore is located on the Deccan plateau in south-eastern Karnataka. Bangalore has an estimated metropolitan population of 6.1 million, making it India's third-largest city and fifth-largest metropolitan (Fig. 1).

Bangalore, over the years, has evolved into a manufacturing hub for public sector heavy industries—particularly aerospace, telecommunications, machine tools, heavy equipment, space and defense. The establishment and success of business software service firms in Bangalore after the liberalization of India's economy has led to the growth of India's information technology industry. Bangalore is referred to as the Silicon Valley of India and accounts for 35 percent of India's software experts.

Home to prestigious colleges and research institutions, the city has the second-highest literacy rate among the metropolitan cities in the nation. Bangalore is known as the garden city of India because of its climate, greenery and the presence of many public parks, including the Lal Bagh and Cubbon Park.

Bangalore is situated in the South-East part of Karnataka at an average elevation of 920 meters from MSL (3,018 feet). It is positioned at 12.97° North latitude and 77.56° Eastern longitude and covers an area of 2190 square kilometers. Bangalore district borders with Kolar district in the northeast, Tumkur district in the northwest, Mandya district in the southwest, Chamarajanagar district in the south and the neighboring state of Tamil Nadu in the southeast.

Bangalore has a large number of lakes. Of these Sankey lake, Ulsoor lake and Yediyur lake being the major ones. Because of its elevation, Bangalore enjoys a pleasant and unflappable climate throughout the year. The highest temperature recorded is 39°C (102°F) and the lowest is 11°C (52°F). The wettest months are August, September and October; with a heaviest rainfall of 180 mm recorded in 24-hour period.

Fig. 1. Showing the study area in Bangalore city

Bangalore is the Third most populous city in India and the 27th largest city in the world by population. With a decadal growth rate of 38 per cent, Bangalore is the fastest-growing Indian metropolis.

Bangalore's population with an overall literacy rate of 83 per cent is the second highest for an Indian metropolis, after Mumbai. The city's workforce structure is predominantly non-agrarian, with only 6 per cent of Bangalore's workforce being engaged in agriculture-related activities. Its tree-lined streets and abundant greenery have led to it being called the 'Garden City' of India. However, since local entrepreneurs and the technology giant, Texas Instruments, discovered its potential as a high-tech city in the early 1980s, Bangalore has seen a major technology boom. It is now home to more than 250 high-tech companies including homegrown giants like Wipro and Infosys. There are more than ten organized retailers (firms) with more than 100 outlets, including Metro AG, operating in Bangalore city alone. The super marketers like Food World, Niligiri's, Trinethra, Subhiksha and Spencer's are the major players operating with their chain of outlets in Bangalore.

3.2 Sampling Design

To fulfill the objectives related to the retail outlet operations of the study, a simple random sampling technique was used. Bangalore was selected as the study area as this city was the hub of retail revolution and has different retail chains operating from a long period of time. Also many new retail chains have opened their outlets recently in the city and many retail chains have made Bangalore as their focal point of their managerial operations.

The retail shops involved in retailing selected products in different formats were selected for the study. The retail shops under modern format such as Subiksha, Food World, Fabmall, Spencer, Safal were selected and traditional format retail shops were also selected at the rate of 5 constituting totally 10 retail outlets.

In addition, to study factors influencing the consumer to purchase food products in these retail outlets, the consumers visiting these outlets were selected at the rate of 30 each for both modern and traditional accounting totally 60 sample size.

3.3 Selection of Products

Since it is difficult to study the overall operations in all the products, only two products from each agricultural commodity groups like rice and wheat in cereals, tur and green gram in pulses, groundnut in oil seeds, groundnut oil and sunflower oil in edible oils, resins and cashew nut in dry fruits were selected.

3.4 Nature and Sources of Data

The detailed information required for the study was collected from both primary and secondary sources in order to accomplish the various objectives of the study and are illustrated with their heads as follows.

A) Primary Data

The primary data on procurement aspects like from whom they procure, quantity procured, costs of procurement were collected to understand the procurement management. The information on stages involved in processing, cost incurred in processing and the value addition per unit of each selected products in different categories such as food grains, pulses, oil seeds, oils and dry fruits.

Apart from these, to study the factors influencing the efficiency of the retail outlets are collected, and also to study the factors influencing the consumers to purchase in retail outlets, the information regarding the socio-economic factors like age, education, occupation, income, family size, family type, religion etc; product factors like price, quality, packaging, labeling; and other factors like range of products, convenience, location, credit, home delivery, parking facility, service quality and schemes and offers etc., were collected from the randomly selected consumers from each outlets using the pre-tested schedule through the personal interview method.

B) Secondary Data.

The secondary information are obtained from selected retailers record with respect to investment pattern, quantity and value of inventories maintained and cost and returns obtained in the business.

3.5 Analytical Techniques Employed

In order to analyze the objectives of the study, the data collected were subjected to analysis through appropriate techniques as follows:

3.5.1 Tabular Analysis

The data collected were presented in tabular form to facilitate easy comparisons. The cost of procurement, inventory costs, investment pattern in retail outlets, value addition and cost and return structure in retail outlets were presented in the form of tabular analysis. The data was summarized with the help of statistical tools like averages and percentages to obtain meaningful inferences.

3.5.2 t-test

The t-test was adopted to analyze the scores obtained from opinion survey of consumers in order to know the factors influencing the consumer to purchase food items in retail outlets.

The formula used for calculating t-values is as follows

$$t = \frac{\bar{X}_i - \mu}{S^2_x} \quad \text{with n-1 degrees of freedom}$$

Where,

μ = value of the population mean

S^2_x= Sample estimate of the population variance

n = sample size.

Factors influencing the consumer Behavior

In the present study, factors influencing the consumer behavior has been considered. Respondents were asked to give their opinion on a 3 point scale. In factors like convenient location of the shop, convenient for purchase, working women convenience, there are three categories.

Category	Score
Most convenient	3
Convenient	2
Less convenient	1

In case of packing, schemes and offers, attractive advertisement, store image and labeling, scoring was given as

Category	Score
Highly Attractive	3
Attractive	2
Less Attractive	1

In factors like service to costumers, behaviour of the employees and availability of quality products, scoring was given as

Category	Score
Very Good	3
Good	2
Moderately Good	1

Whereas in case of parking facility and home delivery scoring was given as

Category	Score
Adequately Available	3
Available	2
Less Available	1

In case of range of the products available the scoring was,

Category	Score
Wide range	3
Average	2
Very Narrow	1

In case of reasonable price the score adopted were,

Category	Score
Highly reasonable	3
Moderately reasonable	2
Less reasonable	1

In case of payment method, the following scoring was given,

Category	Score
Cash	3
Cheque	2
Credit card	1

In case of shopping is seen enjoyable

Category	Score
Highly enjoyable	3
Enjoyable	2
Less enjoyable	1

In case of save time of shopping, the score were,

Category	Score
More	3
Medium	2
Less	1

In case of frequency of visit, the following score was given.

Category	Score
Regularly	3
Weekly	2
Rarely	1

3.6 Definition of Terms and Concepts Used in the Study

3.6.1 Procurement

a. Procurement cost of products

This cost is computed as the summation of expenses incurred as labour charge, transportation and handling costs, loading and unloading charge and packaging costs.

b. Transportation and handling costs

This cost incurred on hiring the transport facilities and loading and unloading of raw materials.

C. Packaging cost

It was the expenses incurred on packing materials like gunny bags, sutli or any such materials.

3.6.2 Inventory

It is defined as usable but idle resource at different stages.

a. Raw material

It means that the products brought by the retailers that were processed but not packed.

b. Work in process inventory

This group comprised of materials (or) products that were stoked at different stages of cleaning process.

c. Finished product

After processing/value addition products are kept in cloth bags/polythene bags or wrapping boxes and sealed. Such products were considered as finished product

d. Work in sales inventory

This group comprised of finished products that were stocked at different stages of sales network.

d. Cost of carrying inventory

This is expressed in rupees per item held in stock per unit time. It was worked out by adding the items of packaging material cost, labour charge and cost of wastage.

3.6.2 Capital investment

a. Fixed capital

The items included under the fixed capital are the cost of land, building, machinery and equipments and other fixtures.

b. Working capital

The working capital includes cost of raw materials, utilities (like power, oil and water charges), processing material (cloth bags, tags, labels) cost, wages, salaries, company overheads (repair and maintenance cost) and administrative overheads (stationeries expenses, office communication), interest on working capital, chemical cost, license fee, cost of processing and advertisement expenses.

c. Investment on building

This included investment on building for processing/value addition, storage, office and drying yard.

d. Investment on machinery and equipments

Under this, investment made on display cases, floral cases, display walk-in-freezers, hot-food display cases, ice machines, packing machine, weighing machines etc.

e. Investment on other fixtures

Included investment on fan, tube lights, furniture and computers in the retail outlets.

f. Investment on infrastructure

Included investment on power generator, trolleys and transport vehicles.

3.6.3 Processing/value addition

I. Stages of processing/value addition

a. Pre cleaning

It referred to the removal of particles such as pieces of trash, stones, clods, removal of foreign materials, other products etc, larger in size than desirable products from threshed products lot. Incase of fruits and vegetables, it was the washing of fruits and vegetables to remove dusts, removal of decayed material etc.

b. Grading

It referred to the actual cleaning and grading of products based on the quality preferences.

c. Treating

It referred to the application of fungicide, insecticide or combination of both, to products so as to disinfect them from seed borne or soil borne pathogenic organisms and storage insects.

d. Bagging and weighing

It referred to filling of products in bags/ polythene bags to an exact weight.

e. Labeling and stitching

It referred to attaching labels, certificates, tags on the products bags and sewing the seed bags.

3.6.4. Cost and returns of retailers

The total marketing cost incurred by the retailers were calculated by adding shop rent, transportation cost, packaging cost, labour charge, loading and unloading charge and miscellaneous charges like repair and maintenance and electricity charge. The percentage share of the value of the total value has been worked out.

Gross return

Gross returns was worked out by deducting the total purchase value from total sale value

Gross returns = Total Sale Value – Total Purchase Value

Net returns

Net returns was arrived at by deducting the total marketing costs from gross returns

Net returns = Gross returns – Total Cost of a Retailers

4. RESULTS

In consistence with the objective of the study, the necessary data collected from various sources were analyzed and interpreted and the results of such analysis are presented in this chapter under the following headings.

4.1 Cost of procurement and inventory management in retail outlets

4.2 Investment pattern in retail outlets

4.3 Cost in value addition made by retail outlets.

4.4 Cost and returns in the trade by retail outlets

4.5 Factors influencing the consumer behavior in purchase made in retail outlets.

4.1 Cost of Procurement and Inventory Management in Retail Outlets

4.1.1 Modern outlet

Quantity of procurement of selected commodities by modern retail outlets are presented in Table 4.1. It could be seen from the table that the maximum quantity of grocery purchased was rice (28.1 qtls), followed by tur dal (1.75 qtls), greengram (1.08 qtls), groundnut (0.55 qtls) and wheat (0.59 qtls) on weekly basis. The maximum procurement in case of oils was found in sunflower oil (2.05 qtls) followed by groundnut oil (1.34 qtls) on weekly basis.

Whereas in case of dry fruits purchase frequency was 0.5 indicating these goods were procured once in 15 days and quantity procured was same in both raisins and cashewnut (0.058 qtls).

4.1.2 Traditional outlet

The quantity of procurement of selected commodities by traditional retail outlets are presented in Table 4.2. It was revealed from the table that among all the grocery items and oils, frequency of purchase was once in week in rice, wheat, greengram, tur dal, groundnut, groundnut oil and sunflower oil but it was 0.5 times in a week in raisins and cashewnut. Rice was procured in highest quantity (16.8 qtls) followed by tur dal (1.3 qtls), groundnut (0.9 qtls), greengram (0.7 qtls) and wheat (0.63 qtls).

Whereas in case of oils, sunflower oil was procured in highest quantity (1.55 qtls) followed by groundnut oil (0.95 qtls). In case of dry fruits both raisins and cashewnut were procured in same quantity (0.032 qtls).

4.1.3 Costs Incurred in Procurement of Food Items by Retail Outlets

4.1.3.1 Modern outlets

The weekly costs incurred in procurement of food item in modern retail outlets in Bangalore city are presented in Table 4.3. It was revealed form the table that among grocery items, rice accounted for highest total cost (Rs. 37278.00) of procurement followed by tur dal (Rs. 7070.00), groundnut (Rs. 4218.00), greengram (Rs. 3261.60) and wheat (Rs. 955.20), while procured quantity was maximum in rice (21.8 qtls) followed by tur dal (1.75 qtls), greengram (1.08 qtls), groundnut (0.95 qtls) and wheat (0.59 qtls).

Other than the price of the product, transport cost, cleaning and weighing charge, loading and unloading charge and packaging material costs were the prime costs in procurement. Among the food items procured, highest cost incurred in transportation followed by cleaning and weighing, loading and unloading and packaging material cost. The transportation cost, cleaning and weighing charges, loading and unloading and packaging material cost incurred in rice were Rs. 1090, Rs. 763, Rs. 654 and Rs. 545 respectively followed by in tur dal Rs. 87.5, Rs. 61.25, Rs. 52.50, Rs. 43.75, in greengram Rs. 54, Rs. 37.8, Rs. 32.4, RS. 27, in groundnut Rs. 47.5, Rs. 33.25, Rs. 28.51 and Rs. 23.75. in wheat Rs. 29.5, Rs. 20.65, 17.7, Rs. 14.25. Further the total cost of procurement per quintal was

Table 4.1. Procurement Pattern of Food Items by Modern Outlets

(Qtls/week)

Products	Source of procured	Purchase Frequency/ week	Quantity Purchased
Rice	Traders in APMC	1	21.8
Wheat	Traders in APMC	1	0.59
Greengram	Traders in APMC	1	1.08
Tur Dal	Traders in APMC	1	1.75
Groundnut	Traders in APMC	1	0.95
Groundnut oil	Distributors	1	1.34
Sunflower oil	Distributors	1	2.05
Resin	Distributors	0.5	0.058
Cashewnut	Distributors	0.5	0.058

Table 4.2. Procurement Pattern of Food Items by Traditional Outlets

(qtls/week)

Products	Source of procurement	Purchase Frequency/ week	Qty Purchased
Rice	Traders in APMC	1	16.8
Wheat	Traders in APMC	1	0.63
Greengram	Traders in APMC	1	0.7
Tur Dal	Traders in APMC	1	1.3
Groundnut	Traders in APMC	1	0.9
Groundnut oil	Distributors	1	0.95
Sunflower oil	Distributors	1	1.55
Resin	Distributors	0.5	0.032
Cashewnut	Distributors	0.5	0.032

Table 4.3.Cost incurred in Procurement of Food Items by Modern Retail Outlets

Products	Qty Procured (qtl)	Price (Rs/qtl)	Total value (Rs)	Transport Cost (Rs)	Cleaning & Weighing Charge(Rs)	Loading & Unloading (Rs)	Packaging material cost (Rs)	Total Cost (Rs)	Cost/qtl (Rs)
Rice	21.80	1570	34226.00	1090.00	763.00	654.00	545.00	37278.00	1710.00
Wheat	0.59	1440	849.60	29.50	20.65	17.70	14.75	932.20	1580.00
Greengram	1.08	2880	3110.40	54.00	37.80	32.40	27.00	3261.60	3020.00
Tur Dal	1.75	3900	6825.00	87.50	61.25	52.50	43.75	7070.00	4040.00
Groundnut	0.95	4300	4085.00	47.50	33.25	28.50	23.75	4218.00	4440.00
Groundnut oil	1.34	7960	10666.40	67.00	-	-	-	10733.40	8010.00
Sunflower oil	2.05	7000	14350.00	102.50	-	-	-	14452.50	7050.20
Raisins	0.058	11900	690.20	2.06	-	-	1.45	693.71	11960.50
Cashewnut	0.058	26000	1508.00	2.06	-	-	1.45	1511.51	26060.51

maximum in groundnut (Rs. 4440) followed by in tur dal (Rs. 4040), greengram (Rs. 3020), rice (Rs. 1710) and wheat (Rs. 1580).

Among oils, sunflower oil was procured in maximum quantity (2.05 qtls/week) followed by groundnut oil (1.34 qtls/week). The total cost were more in sunflower oil (Rs. 14452.5) than in groundnut oil (Rs. 10733.4). In edible oils transport cost was the only prime cost, no loading and unloading charge and packaging material cost. Transportation cost was high in sunflower oil (Rs. 102.5) than groundnut oil (Rs. 67). The total cost per quintal was high in groundnut oil (Rs. 8010/week), less in sunflower oil (Rs. 7050.2/week).

Among dry fruits both raisins and cashewnuts were procured in same quantity (each 0.058 qtls/fortnight), cashewnut accounted for total cost of Rs. 1511.51 and raisins Rs. 693.21. In raisins and cashewnut transport cost and packaging material cost were the only the two procurement cost components which accounted for Rs. 2.06 and 1.45 respectively both in raisins and cashewnut. Total cost of procurement per quintal was high in cashewnut (Rs. 26060.51) followed by raisins (Rs. 11960.5).

4.1.3.2 Traditional retail outlets

The weekly cost incurred in procurement of selected food commodities by traditional retail outlets was presented in Table 4.4.

Among groceries, the highest total cost was accounted in rice (Rs. 30240/week) and minimum cost was accounted in wheat (Rs. 1039.5/week). The total costs of other groceries were Rs. 5543.5/week in tur dal, Rs. 4403/week in groundnut and Rs. 2463/week in greengram.

In traditional outlets, other than the price of the product maximum cost incurred was in cleaning and weighing, followed by in transportation, loading and unloading and packaging material. These costs were Rs. 840, Rs. 756, Rs. 504 and Rs. 420 respectively in rice Rs. 65, Rs. 58.5, Rs. 39, Rs. 32.5 in tur dal, Rs. 45, Rs. 40,5, Rs. 27 and Rs. 22.5 in groundnut and Rs. 35, Rs. 31.5, Rs. 21, Rs. 17.5 in greengram and Rs. 31.5, Rs. 28.35, Rs. 18.9 and Rs. 15.75 in wheat. The total cost per quintal was maximum in groundnut (Rs. 4510/week) followed by in tur dal (Rs. 4110/week), greengram (Rs. 3090/week), rice (Rs. 1800/week) and wheat (Rs. 1650/week).

Among oils, the maximum procurement was found in sunflower oil (1.55 qtls/week) and less in groundnut oil (0.95 qtls/week) thus the total cost were also high (Rs. 11167.75 and Rs. 7756.75) in respective commodities. Transportation cost was high in sunflower oil (Rs. 69.75) than in groundnut oil (Rs. 42.75), but total cost per quintal was more in groundnut oil (Rs. 8165) than in sunflower oil (Rs. 7205).

In dry fruits both raisins and cashewnut were procured in less quantity (0.032 qtls). Total cost was maximum in cashewnut (Rs. 865.92), than in raisins (Rs. 414.72). The transportation cost and packaging material cost accounted for Rs. 1.12 and 0.80 respectively in both raisins and cashewnut. Total cost per quintal was high in cashewnut (Rs. 27060) than in raisins (Rs. 12960).

In traditional retail outlets cost incurred in labour charge for cleaning and packing was found to be more compared to modern outlets.

4.1.4 Comparison of Procurement Costs between Modern and Traditional Outlets

Comparison of procurement cost between modern and traditional outlets is shown in the Table 4.5.

In cereals mean value of procurement cost in modern outlet were Rs. 1710 and Rs. 1580 respectively for rice and wheat and in traditional outlet it was Rs. 1800 and Rs. 1650 respectively, The ‘t’ values calculated in case of rice was -3.53 and in wheat it was -1.53 and both were non significant.

In the case of greengram and tur dal, mean value of procurement cost in modern format were Rs. 3020 and Rs.4040 respectively and Rs. 3090 and Rs. 4110 respectively in traditional outlet. The ‘t’ values calculated for greengram and tur dal were -0.99 and -1.75 respectively and were non significant. In groundnut the mean value in modern outlet was Rs.

Table 4.4. Cost incurred in Procurement of Food Items by Traditional Retail Outlets

Products	Qty Procured (qtl)	Price (Rs/qtl)	Total value (Rs)	Transport Cost (Rs)	Cleaning & Weighing Charge(Rs)	Loading & Unloading (Rs)	Packaging material cost (Rs)	Total Cost (Rs)	Cost/qtl (Rs)
Rice	16.80	1650	27720	756.00	840.00	504.00	420.00	30240.00	1800
Wheat	0.63	1500	945	28.35	31.50	18.90	15.75	1039.50	1650
Greengram	0.70	2940	2058	31.50	35.00	21.00	17.50	2163.00	3090
Tur Dal	1.30	3960	5148	58.50	65.00	39.00	32.50	5343.00	4110
Groundnut	0.90	4360	3924	40.50	45.00	27.00	22.50	4059.00	4510
Groundnut oil	0.95	8120	7714	42.75	-	-	-	7756.75	8165
Sunflower oil	1.55	7160	11098	69.75	-	-	-	11167.75	7205
Raisins	0.032	12900	412.8	1.12	-	-	0.80	414.72	12960
Cashewnut	0.032	27000	864	1.12	-	-	0.80	865.92	27060

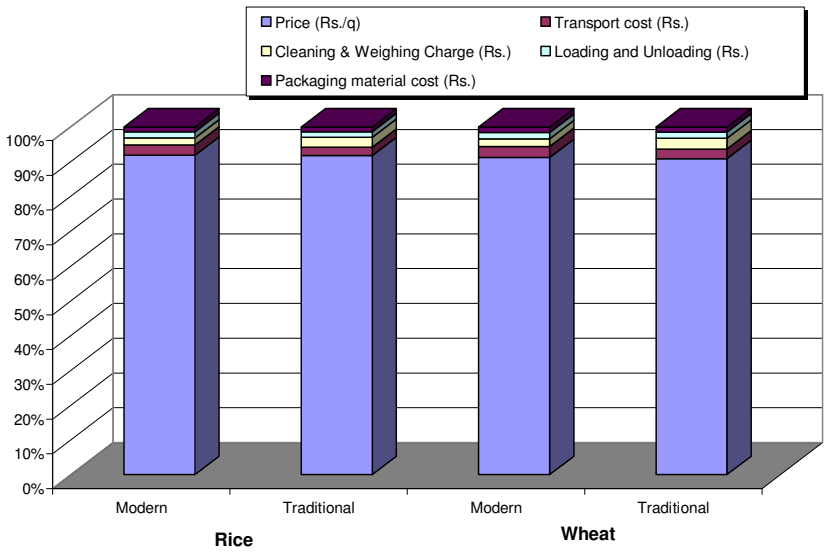


Fig. 1a Components of Procurement cost of rice and wheat by modern and Traditional retail outlets

Fig. 1a. Components of Procurement Cost of Rice Wheat by Modern and Traditional Retail Outlets

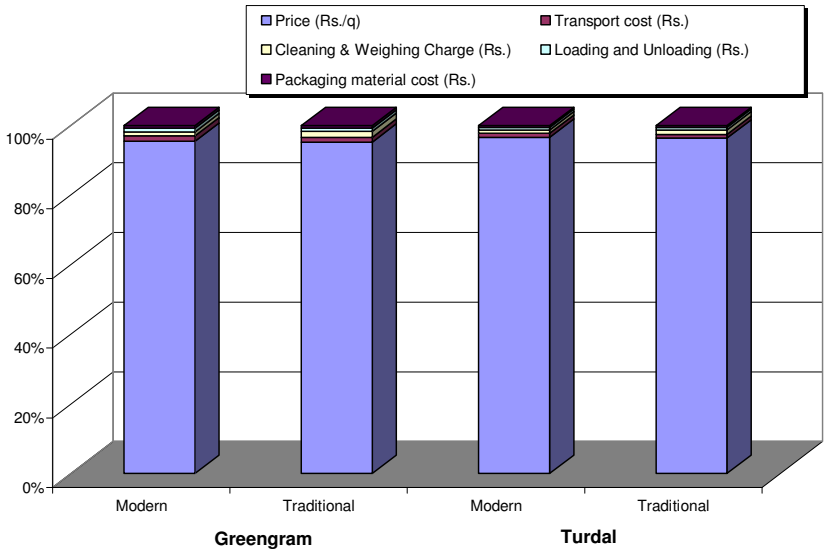


Fig. 1b Components of Procurement cost of greengram and tur by modern and Traditional retail outlets

Fig. 1b. Components of Procurement Cost of Greengram and Tur dal by Modern and Traditional Retail outlets

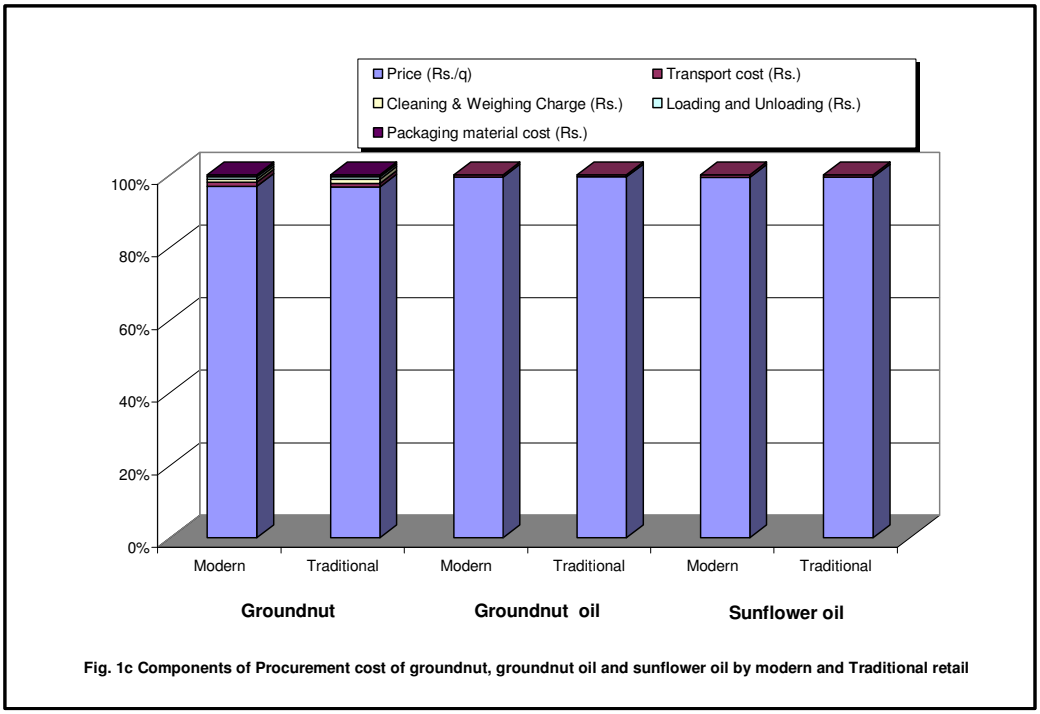


Fig. 1c Components of Procurement cost of groundnut, groundnut oil and sunflower oil by modern and Traditional retail

Fig. 1c. Components of Procurement Cost of Groundnut, Groundnut oil and Sunflower oil by Modern and Traditional Retail Outlets

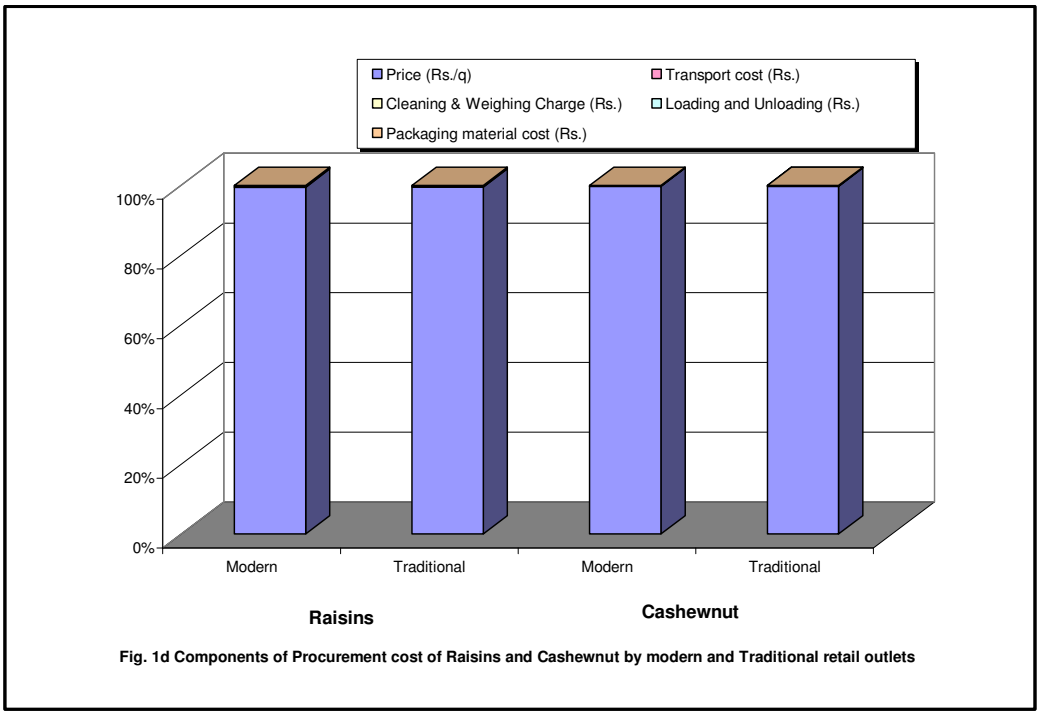


Fig. 1d Components of Procurement cost of Raisins and Cashewnut by modern and Traditional retail outlets

Fig. 1d. Components of Procurement Cost of Raisins and Cashewnut by Modern and Traditional Retail Outlets

Table 4.5. Comparison of Mean Value of Procurement Costs between Modern and Traditional Outlets

Sl no	Commodities	Modern (n=5)		Traditional (n=5)		t-value
		Mean (Rs.)	SD	Mean (Rs.)	SD	
1	Rice	1710.00	44.72	1800	35.36	-3.53^{NS}
2	Wheat	1580.00	82.16	1650	61.24	-1.53^{NS}
3	Greengram	3020.00	130.38	3090	89.44	-0.99^{NS}
4	Tur dal	4040.00	70.71	4110	54.77	-1.75^{NS}
5	Groundnut	4440.00	158.11	4510	251.00	-0.53^{NS}
6	Groundnut oil	8010.00	114.02	8165	2739.00	-0.13^{NS}
7	Sunflower oil	7050.20	158.11	7205	54.77	-2.07^{NS}
8	Raisins	11960.50	418.33	12960	1193.73	-1.77^{NS}
9	Cashewnut	26060.51	3102.42	27060	1695.58	-0.63^{NS}

Note: NS-Non Significant

4440 and in traditional outlet mean value was Rs. 4510, and the 't' value calculated was -0.53, which was non-significant.

In the case of sunflower oil and groundnut oil mean values were Rs. 7050.2 and Rs. 8010 respectively in modern outlet and in traditional outlets mean values were Rs. 8165 and Rs. 7205 respectively. The 't' values calculated for sunflower oil and groundnut oil were -0.13 and -2.07 respectively and were non-significant.

The mean values in the case of raisins and cashewnut in modern outlet were Rs. 11960.5 and Rs. 26060.51 respectively and were Rs. 12960 and Rs. 27060 respectively in traditional outlets. The 't' values calculated were -1.77 in raisins and -0.63 in cashewnut, but were non-significant both in the case of raisins and cashewnut.

4.1.5 Inventory Management and its Costs in Retail Outlets

Inventory refers to stocks of anything necessary to do business. These stocks present a large portion of the business investment and must be well managed in order to maximize profits. Raw materials inventory, work in process inventory, finished products inventory and work in sales inventory represent the various form of inventories.

Shrinkage value, labour charges and packing material charges were added to the inventory cost components.

4.1.5.1 Inventory Management in Modern Outlets

The weekly inventory management in modern outlet is presented in the Table 4.6. It is seen from the table that different short time period inventories were maintained in different commodities. In groceries and oils, the period was 6 days, whereas in case of raisins and cashewnut it was 13 days.

The quantum of inventories was found to be the highest in rice (21.8 qtls) followed by tur dal (1.75 qtls), greengram(1.08 qtls), groundnut (0.95 qtls) and wheat (0.59 qtls) in groceries. The respective inventories were valued at Rs. 37,278, Rs. 7070, Rs. 4218, Rs. 3261.6, and Rs 932.2 respectively. Among different types of inventories, the finished product inventory was observed to be the highest both in terms of quantity and storage period. It was 8.65 qtls in rice valued at Rs. 14,791.5 held for 2.5 days, 0.24 qtls in wheat valued at Rs. 379.2, held for 2.5 days, 0.42 qtls in greengram valued at Rs. 1268.4 held for a period 2.5 days, 0.69 qtls in tur dal valued a Rs. 2828 held for 2.5 days, 0.37 qtls in groundnut valued at Rs. 1776 held for 2.5 days. Next to the finished product inventory, most of the products were detained at work in sales inventory and raw material inventory. Work in sales inventory in rice was 5.86 qtls for 2 days, in wheat was 0.16 qtls for 2 days, in tur dal 0.48 qtls for 2 days and in groundnut it was 0.3 qtls for 2 days. The storage period for work in process inventory was low in most of the products and it was 0.5 days in rice, wheat, greengram, tur dal and groundnut. The packaging material cost and labour charges for cleaning and packing were found to be the major cost components of inventory in all the commodities. However, packaging material cost and labour charges per quintal were Rs. 28.96 and Rs. 18.75 respectively in rice, Rs. 18.98 and Rs. 29.69 per qtl in wheat, Rs. 18.14 and Rs. 28.61 per quintal in greengram and Rs. 44.23 and Rs. 30.73 per qtl in groundnut, respectively. The shrinkage cost per quintals was Rs. 17.18 in rice, Rs. 15.76 in wheat, Rs. 30.16 in greengram and 40.4 in tur dal.

On an average the total inventory cost per quintal was high in groundnut (Rs. 196.67), followed by in tur dal (Rs. 87.99), greengram (Rs. 76.7), rice (Rs. 64.8) and wheat (Rs. 64.44).

In oils, the quantity of inventory maintained and values were maximum in sunflower oil (2.05 qtls valued at Rs. 141452.5) and it was (1.34 qtls valued at Rs. 10733.4) in groundnut oil. There are only 2 types of inventories in oils and dry fruits they are finished product inventory and work in sales inventory.

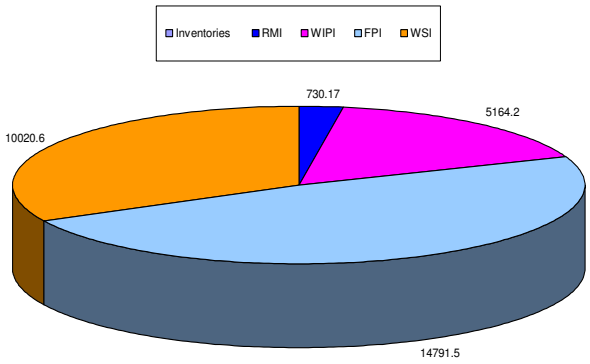
Among two types of inventories, the finished product inventory was observed to be the highest both in terms of quantity and storage period. It was 1.58 quintals in sunflower oil valued at Rs. 11139 held for 3 days and it was 1.02 quintals in groundnut oil valued at Rs. 8170.2 held for 3 days. The product detained at work in sale inventory in sunflower oil was 0.47 quintal for 3 days valued at Rs. 3313.5 and in groundnut oil it was 0.32 quintals valued at

Table 4.6.Weekly Inventory Management in modern format

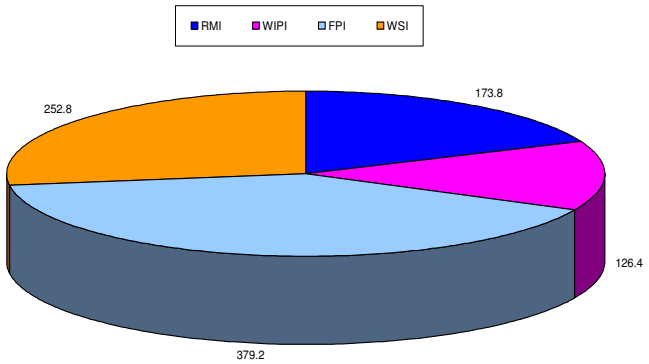
Products	Inventories	Total Qty (qtls)	Values (Rs)	No. of Days Stored	Cost Components(Rs)			
					Shrinkage value	Labour charge (Cleaning& Packing)	Packaging material cost	TIC
Rice	RMI	4.3	7301.7	1	73.01	-	-	73.01
	WIPI	3.02	5164.2	0.5	52.64	105.7	-	157.34
	FPI	8.65	14791.5	2.5	147.91	302.75	631.45	1082.11
	WSI	5.86	10020.6	2	100.20	-	-	100.2
	T inv	21.8	37278	6	372.55	408.75	631.45	1412.75
	Per qtl				17.18	18.75	28.96	64.80
Wheat	RMI	0.11	173.8	1	1.73	-	-	1.73
	WIPI	0.08	126.4	0.5	1.26	2.8	-	4.06
	FPI	0.24	379.2	2.5	3.79	8.4	17.52	29.71
	WSI	0.16	252.8	2	2.52	-	-	2.52
	T inv	0.59	932.2	6	9.3	11.2	17.52	38.02
	Per qtl				15.76	18.98	29.69	64.44
Green Gram	RMI	0.208	634.2	1	6.34	-	-	6.34
	WIPI	0.142	422.8	0.5	4.2	4.9	-	9.1
	FPI	0.42	1268.4	2.5	12.68	14.7	30.66	58.04
	WSI	0.31	939.2	2	9.36	-	-	9.36
	T inv	1.08	3261.6	6	32.58	19.6	-	82.84
	Per qtl				30.16	18.14	28.38	76.70
Tur dal	RMI	0.33	1333.2	1	13.33	-	-	13.33
	WIPI	0.22	888.8	0.5	8.88	7.7	-	16.58
	FPI	0.69	2828	2.5	28.28	24.5	51.1	103.88
	WSI	0.48	2020	2	20.20	-	-	20.20
	T inv	1.75	7070	6	70.70	32.2	50.08	153.99
	Per qtl				40.4	18.4	28.61	87.99
Ground nut	RMI	0.15	666	1	6.6	-	-	6.6
	WIPI	0.1	444	0.5	4.4	3.5	-	7.9
	FPI	0.4	1776	2.5	17.7	14	29.2	60.9
	WSI	0.3	1332	2	13.32	-	-	13.32
	T inv	0.95	4218	6	42.02	17.5	29.2	186.84
	Per qtl				44.23	18.42	30.73	196.67
Groundnut oil	FPI	1.02	8170.2	3	20.42	-	-	20.42

	WSI	0.32	2563.2	3	6.40	-	-	6.40
	T inv	1.34	10733.4	6	26.82			26.82
	Per qtl				20.01			20.01
Sunflower oil	FPI	1.58	11139	3	27.84	-	-	27.84
	WSI	0.47	3313.5	3	8.28	-	-	8.28
	T inv	2.05	14452.5	6	36.12	-	-	36.12
	Per qtl				17.61			17.61
Raisins	FPI	0.029	346.85	7	0.86	1.01	2.11	3.98
	WSI	0.029	346.85	6	0.86			0.8
	T inv	0.058	693.70	13	1.72	1.01	2.11	4.78
	Per qtl				29.65	17.41	36.37	82.41
Cashewnut	FPI	0.029	755.75	7	1.88	1.01	2.11	5
	WSI	0.029	755.75	6	1.88	-	-	1.88
	T inv	0.058	1511.50	13	3.76	1.01	2.11	6.88
	Per qtl				64.82	17.41	36.37	118.62

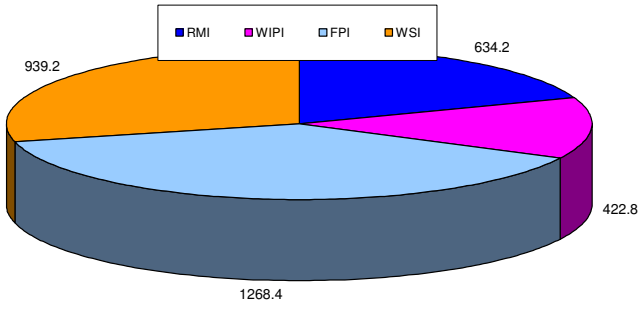
RMI : Raw Material Inventory, WIPI : Work In Process Inventory,
FPI : Finished Product Inventory, WSI : Work In Sales Inventory,
T inv : Total Inventory, TIC : Total Inventory Cost



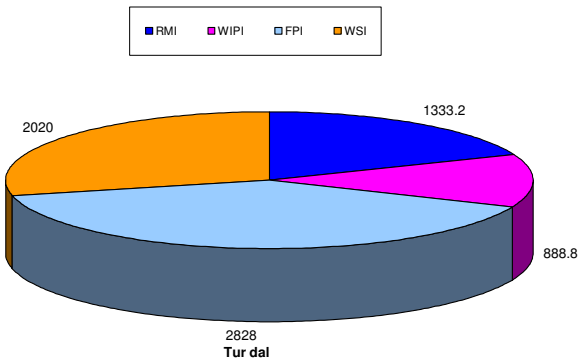
Rice



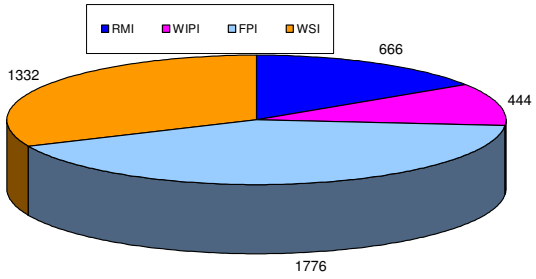
Wheat



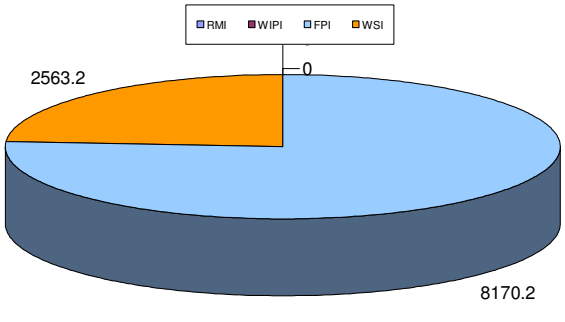
Greengram



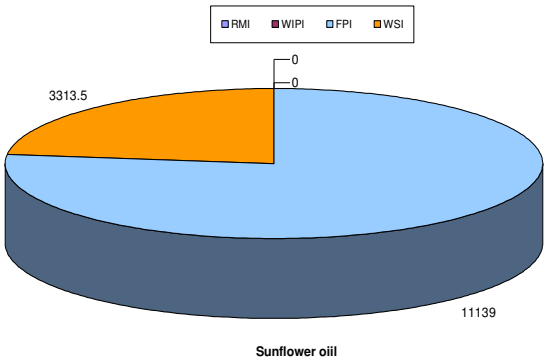
Tur dal

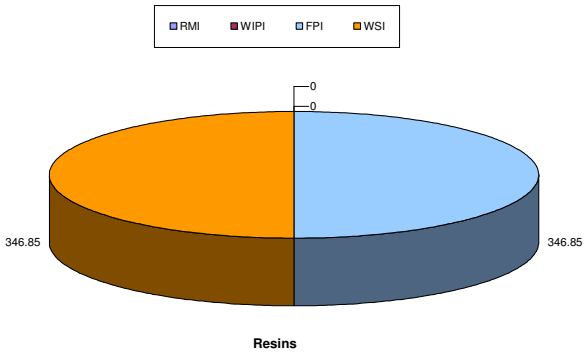


Groundnut



Groundnut oil





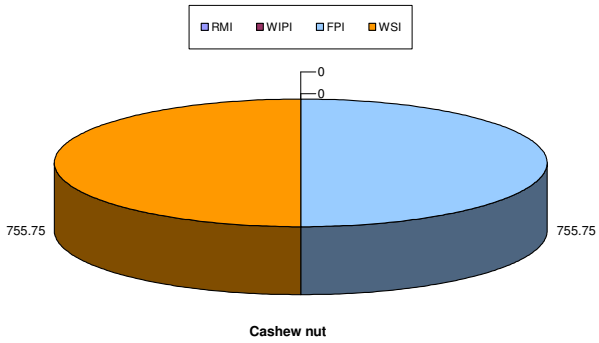


Fig. 2. Inventory Management in Modern Retail Outlet

Table: 4.7.Weekly Inventory Management in Traditional Outlet

Products	Inventories	Total Qty (qtls)	Values (Rs)	No. of Days Stored	Cost Components(Rs)			
					Shrinkage value	Labour charge (Cleaning& Packing)	Packaging material cost	TIC
Rice	RMI	3.23	5814	1	87.21	-	-	87.21
	WIPI	2.4	4320	0.75	64.8	120	-	184.8
	FPI	6.06	10908	2	163.62	303	242.4	709.02
	WSI	5.11	9198	1.75	137.97	-	-	137.97
	T inv	16.8	30240	5.5	453.6	423	241.4	1119
	Per qtl				27	25.17	14.35	66.60
Wheat	RMI	0.13	214.5	1	3.21	-	-	3.21
	WIPI	0.08	132	0.75	1.98	4	-	5.98
	FPI	0.23	379.5	2	5.69	11.5	9.2	26.39
	WSI	0.19	313.5	1.75	4.7	-	-	4.7
	T inv	0.61	1039.5	5.5	15.59	15.5	9.2	40.28
	Per qtl				25.55	25.40	15.08	66.03
Greengram	RMI	0.12	370.8	1	5.55	-	-	5.55
	WIPI	0.09	278.1	0.75	4.17	4.5	-	8.67
	FPI	0.26	803.4	2	12.05	13	10.4	35.45
	WSI	0.23	710.7	1.75	10.66	-	-	10.66
	T inv	0.70	2163	5.5	32.44	17.5	10.4	60.33
	Per qtl				46.34	25	14.85	86.18
Tur dal	RMI	0.24	986.4	1	14.79	-	-	14.79
	WIPI	0.17	698.7	0.75	10.48	8.5	-	18.98
	FPI	0.48	1972.8	2	29.59	24	19.2	72.79
	WSI	0.4	1644	1.75	24.66	-	-	24.66
	T inv	1.3	5301.9	5.5	79.52	32.5	19.2	131.22
	Per qtl				61.16	25	14.76	100.93
Groundnut	RMI	0.17	766.7	1	11.50	-	-	11.5
	WIPI	0.12	541.3	0.75	8.11	6	-	14.11
	FPI	0.33	1488.3	2	22.32	16.5	13.2	52.02
	WSI	0.28	1262.8	1.75	18.942	22.5		22.5
	T inv	0.90	4059.1	5.5	60.88	45	13.2	100.13
	Per qtl				67.64	50	14.66	111.26

Groundnut oil	FPI	0.71	5797.15	3	14.41	-	-	14.41
	WSI	0.24	1959.6	3	4.87	-	-	4.87
	T inv	0.95	7756.75	6	19.28	-	-	19.28
	Per qtl				20.29	-	-	20.29
Sunflower oil	FPI	1.0	7605	3	18.9	-	-	18.9
	WSI	0.55	4182.75	3	10.39	-	-	10.39
	T inv	1.55	11787.75	3	29.29	-	-	29.29
	Per qtl				18.89	-	-	18.89
Raisins	FPI	0.016	207.36	7	0.51	0.64	0.64	1.79
	WSI	0.016	207.36	5	0.51	-	-	0.51
	T inv	0.032	414.72	12	1.02	0.64	0.64	2.3
	Per qtl				31.87	20	20	71.8
Cashewnut	FPI	0.016	432.96	7	1.08	0.64	0.64	2.36
	WSI	0.016	432.96	5	1.08	-	-	1.08
	T inv	0.032	865.92	12	2.16	0.64	0.64	3.44
	Per qtl				67.5	20	20	107.5

RMI : Raw Material Inventory, WIPI : Work In Process Inventory,
FPI : Finished Product Inventory, WSI : Work In Sales Inventory,
T inv : Total Inventory, TIC : Total Inventory Cost

Rs. 3313.5 for 3 days. Shrinkage value for sunflower oil was Rs. 17.61 and Rs. 20.01 for groundnut oil per quintal.

In oil, packaging material cost and labour charges for cleaning and packing were not included. On an average inventory costs per quintal in oils were Rs. 17.61 in sunflower oil and Rs. 20.01 in groundnut oil.

The total quantity of inventory was found to be the same in raisins and cashewnut (0.058 qtls). Both finished product inventory and work in sales inventory was observed to be the same in terms of quantity. It was 0.029 qtls in raisins valued at Rs. 346.85 for 7 days and 0.029 qtls in cashewnut valued at Rs. 755.75 for 7 days in finished product inventory. The quantity which were stored in work in sales inventory held for 6 days in both raisins and cashewnut.

4.1.5.2 Inventory Management in Traditional Outlets

Table 4.7 presents the weekly inventory management in traditional outlet in the study area.

It can be understood from the table that the storage period of inventories was 5.5 days in groceries. In the case of oils the period was 6 days and in case of raisins and cashewnut it was 12 days.

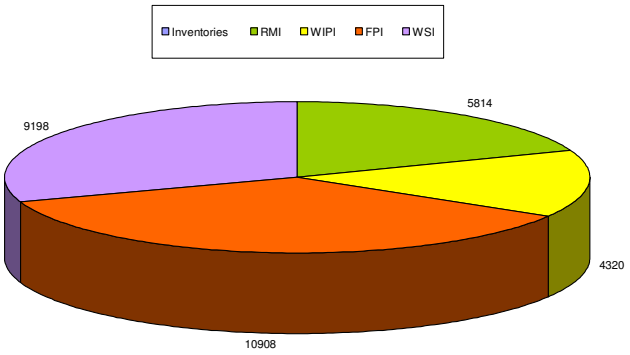
The quantity and value of groceries was high in rice (16.8 qtls accounted for worth of Rs. 30240) followed by in tur dal (1.3 qtls accounted for worth of Rs. 5301.9), groundnut (0.9 qts accounted for worth of Rs. 4059.1), greengram (0.7 qtls accounted for worth of Rs. 2163) and wheat (0.61 qtls accounted for worth of Rs. 1039.5). The maximum quantity of inventory was held in finished product inventory stage for 2 days in all the grocery items. It was 6.06 quintals in rice, 0.23 quintals in wheat, 0.26 quintals in greengram, 0.48 quintals in tur dal 0.33 quintals in groundnut.

The work in process inventory accounts for less quantity and minimum storage period in almost all groceries, work in sales inventory was 5.11 quintals in rice, 0.19 quintals in wheat, 0.23 quintals in greengram, 0.4 quintals in tur dal and 0.28 quintals in groundnut. In respect of costs, packaging material and labour charge were the major and shrinkage values was the minor components in inventory management.

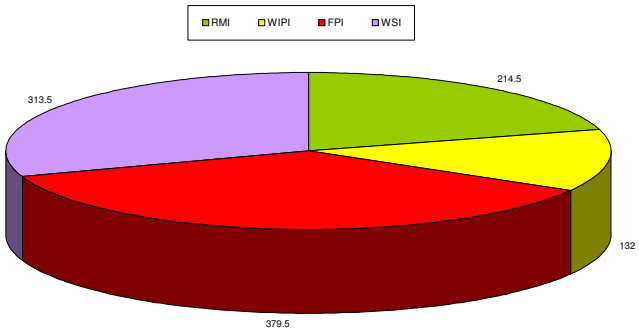
The packaging cost per quintal was Rs. 14.35 in rice, Rs.15.08 in wheat, Rs. 14.85 in greengram, Rs. 14.76 tur dal and Rs. 14.66 in groundnut. The labour charge per quintal accounted for Rs. 25.17, Rs. 25.40, Rs.25.00, Rs. 25.00 and Rs.14.66 in rice, wheat, greengram, tur dal and groundnut respectively. Labour charges for packaging and cleaning and shrinkage values were found to be maximum in the case of traditional outlet as compared to modern outlet. Total inventory cost per quintal was maximum in groundnut (Rs. 111.26) followed by tur dal (Rs.100.93) followed by greengram (Rs.86.18), rice (Rs.66.60) and wheat (Rs. 66.03).

In oils, inventory period was 6 days in both groundnut oil and sunflower oil. The quantity and value of inventory was maximum in sunflower oil (1.55 qtls valued at Rs. 11787.7) followed by in groundnut oil (0.95 qtls valued at Rs.7756.75). The finished product inventory had the highest quantity in sunflower oil (1.0 qtls valued at Rs.7605 for 3 days) and it was 0.71 qtls in groundnut oil for 3 days. The work in sales inventory was 0.55 qtls in sunflower oil and 0.24 quintal in sunflower for 3 days each. In oil, labour charges and packaging charges were not included, shrinkage value is only the cost component in inventory management. However total inventory cost per quintal in groundnut oil was Rs. 20.29 in sunflower oil it was Rs. 18.89.

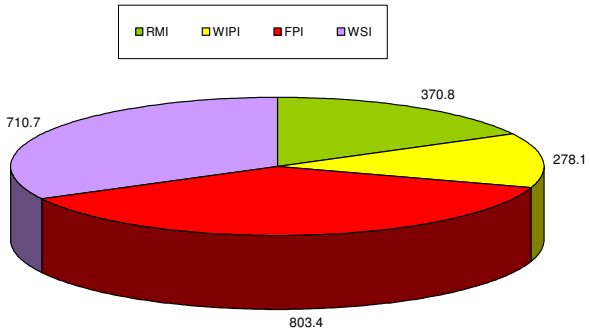
Whereas in case of raisins and cashewnut, the quantum of inventory was found to be same in raisins and cashewnut (0.032 qtls). Both finished product inventory and work in sales inventory was observed to be the same in terms of quantity. It was 0.016 quintals in raisins valued at Rs. 207.36 for 7 days and 0.016 quintals in cashewnut valued at Rs. 432.96 for 7 days in finished product inventory. The quantity which was stored at work in sales inventory held for 6 days both raisins and cashewnut, labour charges and packaging cost for raisins and cashewnut was Rs. 20 and Rs. 20 respectively. Shrinkage value for raisins was Rs. 31.87 and in cashewnut it was Rs.67.5. In oils and dry fruits raw material inventory and work in process inventory were not observed. In oils and dry fruits shrinkage values was less.



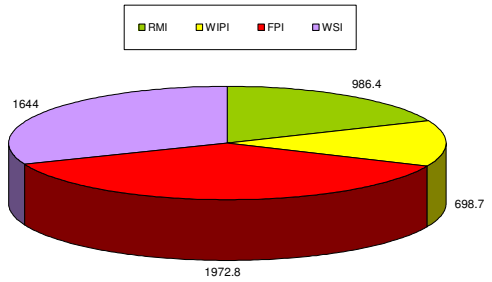
Rice



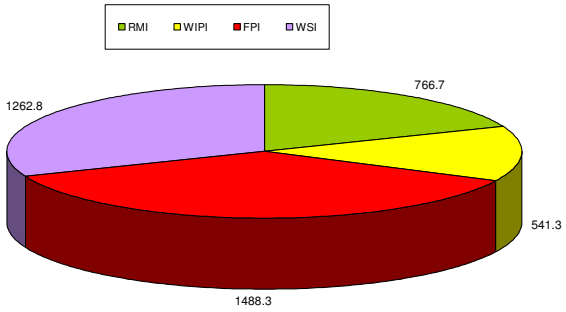
Wheat



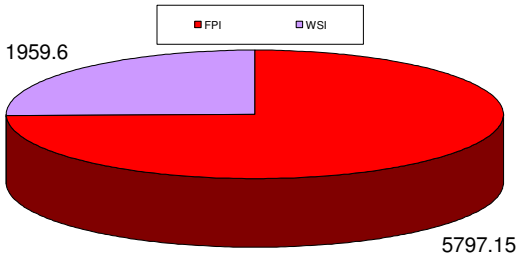
Greengram



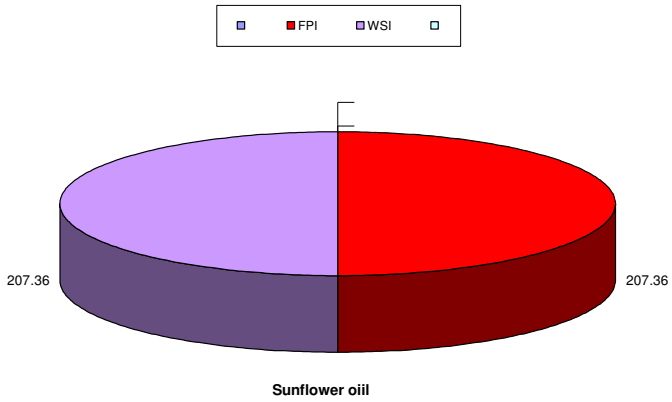
Tur dal

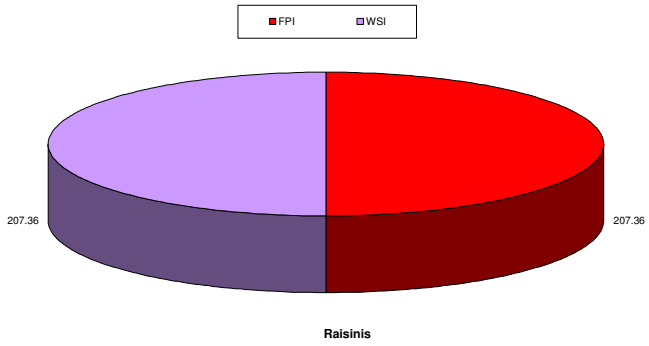


Groundnut



Groundnut oil





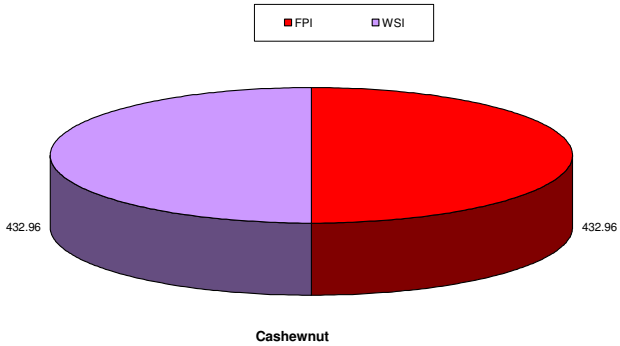


Fig. 3. Inventory Management in Traditional Retail Outlet

4.1.5.3 Comparison of Inventory Costs between Modern and Traditional Retail Outlets for Selected Food Items

It was observed from the Table 4.8, the packaging material cost per quintal was observed to be maximum in modern outlets and was Rs.28.96 in rice, Rs.29.69 in wheat, Rs.25.38 in greengram, Rs.28.61 in tur dal, Rs. 30.73 in groundnut, Rs.36.37 in raisins and cashewnut, shrinkage value and labour charges per quintal were found to be less in modern retail outlets.

Total inventory costs per quintal in modern retail outlets was Rs.64.80 for rice, Rs.64.44 for wheat, Rs.76.7 for greengram, Rs.87.98 for tur dal, Rs.196.67 for groundnut, Rs.20.01 groundnut oil, Rs.17.61 for sunflower oil, Rs.82.41 for raisins and Rs. 118.62 for cashewnut.

Whereas in the case of traditional outlet, shrinkage value and labour charges were found to be maximum and packaging material cost in traditional outlet was less. Shrinkage and labour charge in traditional outlet was Rs. 27.00 and Rs.25.17 respectively Rs.25.55 and Rs.25.40 in wheat, Rs.46.34 in greengram and Rs.25.00 Rs.61.16 and Rs. 25 in tur dal and Rs. 67.64, and Rs.50 in groundnut.

In case of groundnut oil and sunflower oil shrinkage value was the only the major component. There was no packaging material cost and labour charges. Shrinkage value in groundnut oil and sunflower oil was Rs. 20.29 and Rs.18.89 respectively. Whereas in case of raisins, shrinkage value and labour charges were observed to be Rs. 31.87 and Rs.25.00 and it was Rs.67.5 and Rs. 25.00 respectively in cashewnut.

4.1.5.4 Comparison of Mean Values of Inventory Costs between Modern and Traditional Outlets

Comparison of mean value of inventory costs between modern and traditional retail outlets was predicted in the Table 4.9. In the case of rice and wheat mean values of modern outlet were Rs. 211.28 and Rs. 206.02 respectively and the same were Rs. 248.00 and Rs. 238.92 in traditional retail outlet. The 't' value calculated were -1.22 and -1.1, and were non significant.

In case of greengram, tur dal and groundnut mean value in modern retail outlet were Rs. 265.08, Rs. 308.39 and Rs. 319.65 respectively and the same were Rs. 325.28, Rs. 326.57 and Rs. 423.22 in traditional retail outlet respectively. The 't' value calculated were -2.02, -2.59, -3.58 respectively, and were non significant. In the case of groundnut and sunflower oil, mean values in modern outlets were Rs. 40.02 and Rs. 35.19 respectively and in the traditional outlet mean value for groundnut oil was Rs. 40.39 and for sunflower oil it was Rs. 37.75. The 't' values were -2.95 and -47 respectively and were non significant. In the case of raisins and cashewnut mean values in modern outlet were Rs. 164.83 and Rs. 200.00 and in traditional outlet the same were Rs. 143.75 and Rs. 107.50. The 't' value calculated were -2.16 and -8.20, and were found to be non significant.

4.2 Investment Pattern in Retail Outlets

The average area of the retail outlets and their capital investment pattern are presented in Table 4.10. It is observed from the table that the average area of the retail outlet was found to be more in modern outlet (4200 sq. ft.), compared to traditional outlet (3500 sq. ft). The expenditure incurred on the establishment of retail outlet was treated as fixed capital investment which includes land, building, machineries and equipments, infrastructures, other fixtures and other fixed capital. The total fixed investment in modern outlet amounted to Rs 941.77 per sq.ft , which constitute 95.81 per cent of total investment capital. While in traditional outlet the corresponding figures were Rs. 718.58 per sq.ft constituting 95 per cent of the total investment.

Among different components of fixed capital, the proposition of land alone accounts for 81.4 per cent (Rs. 766.65 per sq. ft) of total fixed capital in modern outlet and remaining fixed capital elements such as, machineries equipments, other fixtures, infrastructure, building, other fixed capital accounted for12.71 per cent (Rs. 119.77 sq.ft), 2.4 per cent (Rs. 22.25/sq.ft), 1.75 per cent (Rs. 16.52/sq.ft), 1.72 per cent (Rs. 16.26/sq.ft) and 0.033 per cent (Rs. 0.31/sq.ft) respectively in modern outlet.

Table 4.8. Comparison of Components of Inventory Cost between Modern and Traditional Retail Outlets for Food Items

(Rs/quintal)

Sl no	Products	Type of Retail format	Cost components			
			Shrinkage Value	Labour charge (Cleaning & Packing	Packaging material cost	TIC
1	Rice	Modern	17.18	18.75	28.96	64.80
		Traditional	27.00	25.17	14.35	66.60
2	Wheat	Modern	15.76	18.98	29.69	64.44
		Traditional	25.55	25.40	15.08	66.03
3	Greengram	Modern	30.16	18.14	28.38	76.70
		Traditional	46.34	25.00	14.85	70.95
4	Tur dal	Modern	40.40	18.40	28.61	87.99
		Traditional	61.16	25.00	14.76	100.93
5	Groundnut	Modern	44.23	18.42	30.73	196.67
		Traditional	67.64	50.00	14.66	94.66
6	Groundnut oil	Modern	20.01	-	-	20.01
		Traditional	20.29	-	-	20.29
7	Sunflower oil	Modern	17.61	-	-	17.61
		Traditional	18.89	-	-	18.89
8	Raisins	Modern	29.65	17.41	36.37	82.41
		Traditional	31.87	25.00	20.00	64.37
9	Cashewnut	Modern	64.82	17.41	36.37	118.62
		Traditional	67.50	25.00	20.00	100.00

Table 4.9. Comparison of Mean Values of Inventory Costs between Modern and Traditional Outlets

Sl no	Commodities	Modern (n=5)		Traditional (n=5)		t-value
		Mean (Rs.)	SD	Mean (Rs.)	SD	
1	Rice	211.28	50.94	248	43.59	-1.22^{NS}
2	Wheat	206.02	50.94	238.92	43.6	-1.1 ^{NS}
3	Greengram	265.08	50.57	325.28	43.61	-2.02 ^{NS}
4	Tur dal	308.39	51.55	326.57	43.59	-2.59 ^{NS}
5	Groundnut	319.65	50.94	423.22	40.53	-3.56 ^{NS}
6	Groundnut oil	40.02	0.01	40.39	0.28	-2.95 ^{NS}
7	Sunflower oil	35.19	0.09	37.75	0.08	-47.54 ^{NS}
8	Raisins	164.83	77.54	143.75	143.75	-2.16 ^{NS}
9	Cashewnut	200	102.41	2.15	56.57	-8.2 ^{NS}

Note: NS-Non Significant

Table 4.10. Investment pattern in retail outlets

(in Rs/sq.ft)

	Modern	Traditional
Average Area of the retail outlets(sq ft)	4200	3500
Fixed Capital		
Land	766.66 (81.4)	674.28 (93.83)
Building	16.26 (1.72)	6.2 (0.9)
Machineries & Equipments	119.77 (12.71)	13.60 (1.9)
Infrastructures	16.52 (1.75)	10.86 (1.5)
Other Fixtures	22.25 (2.36)	13.24 (1.84)
Other Fixed Capital	0.31 (0.032)	0.29 (0.04)
Total FC	941.77 (95.81)	718.58 (95)
Working Capital		
Raw Material	19.52 (47.5)	20.57 (54.5)
Salary to employees	9.33 (22.7)	8.17 (21.64)
Power Charges	5.61 (13.7)	4 (10.6)
Packaging Material	3.61 (8.8)	2.85 (7.6)
Others	3.03(7.4)	2.15 (5.7)
Total Working Capital	41.12 (4.18)	37.75 (5)
Total Capital	982.9	756.33

Note: Figures in the parenthesis indicates percentage to the respective total
1. Other fixtures like almeras, lockers, and electrical installations
2. Other includes, License fee,.
3. Others - Repair & Maintenance, Fuel charges, Telephone charges, Office maintenance, Building maintenance, packaging material cost, Advertisement etc.

In the case of working capital, raw materials cost was the prime costs, contributing 47.5 per cent (Rs. 19.52/sq.ft) of the total working capital. The other items of working capital incurred in the establishment of modern retail outlets were salary to employees, power charges, packaging material etc, which contributed 22.7 per cent (Rs. 9.33/sq.ft), 13.7 per cent (Rs. 5.61/sq.ft), 8.8 per cent (Rs. 3.61/sq.ft) and 7.4 per cent (Rs. 3.03/sq.ft) respectively. However total capital in modern outlet is about Rs. 982.9 per square feet.

The table also depicted the investment pattern in traditional retail outlets. Land forms the major component of investment accounting for 93.83 per cent (Rs.674.28) of total fixed investment followed by machine and equipment 1.9 per cent (Rs. 13.60), other fixtures 1.84 per cent (Rs.13.24), infrastructure 1.51 per cent (Rs. 10.86/sq.ft)

It is informed from the Table 4.10 that the investment in traditional outlet land forms a major component of investment accounting for 93.83 per cent (Rs. 674.28 sq.ft) of total investment followed by machineries and equipment 1.9 per cent (Rs. 13.60 sq.ft.), other fixtures 1.84 per cent (Rs.13.24 sq.ft), infrastructure (1.51 per cent (Rs. 10.86/sq.ft) and other fixed capital 0.04 per cent (Rs. 0.29 sq.ft), other fixtures includes almera, lockers and electronic installation.

In the case of working capital, raw materials were the prime costs contributing 54.5 per cent (Rs. 20.57/sq.ft) of the total working capital. The other components working capital invested in the establishment of traditional outlet were salary to employments contributing about 21.64 per cent (Rs. 3.17/sq.ft), power charges 10.6 per cent (Rs. 4/sq.ft), packaging material 7.6 per cent (Rs. 2.85/sq.ft) and other working capital 5.7 per cent (Rs. 5.7/sq.ft). Other working capital includes repair and maintenance, fuel charges, telephone charges, advertisement etc. However, total capital requirement in traditional outlet was about Rs. 756.33/sq. ft.

4.3 Costs in Value Addition Made by Retail Outlets

4.3.1 Processing/value addition in retail outlets

Processing in the retail outlets is the removal of inert materials, other crop seeds and undersized seeds from the raw materials. Processing also includes cleaning and grading. Generally these activities are done through mechanical means.

4.3.1.1 Extent of activities undertaken in preparation of the products for sale in retail outlets

Stage I : Cleaning

Stage II : Grading

Stage III : Bagging

Stage IV : Labeling and sticking.

The extent of activities undertaken in preparation of the products for sale in retail outlets is shown in Table 4.11.

It is revealed from the table that in the entire groceries cent per cent of cleaning and bagging were undertaken by all modern and traditional outlets. However, grading was observed in 60 per cent of modern retail outlet but in traditional retail outlet grading was observed only in 20 per cent in the Bangalore city.

In oils, cleaning, grading, bagging and label and sticking activities were not undertaken, by the retail outlet, rather they were supplied in polythene sachets with all label and pricing.

In dry fruits cent per cent of bagging was undertaken by all the retail outlets. In modern retail outlets cleaning activity was observed in cent per cent, while it was only 10 per cent in traditional outlet. Grading activity was observed to be cent per cent in modern outlet but in traditional outlet grading were not followed in dry fruits. Label and sticking was observed to be cent per cent in modern outlets and in traditional outlet it was observed to be only 40 per cent in the Bangalore city.

Table 4.11. Activities Undertaken in Preparation of the Product for Sale

(Number of respondents)

		Cleaning	Grading	Packing	Labelling
Groceries	Modern	5 (100)	3 (60)	5 (100)	5 (100)
	Traditional	5 (100)	1 (20)	5 (100)	2 (40)
Oils	Modern	-	-	-	-
	Traditional	-	-	-	-
Dry fruits	Modern	5 (100)	5 (100)	5 (100)	5 (100)
	Traditional	1 (10)	-	5 (100)	2 (40)

Note: Figures in the parentheses indicate percentage

4.3.2 Cost of Preparation of Products in Retail Outlets

Cost of preparation of products in retail outlets is presented in Table 4.12. It was observed from the table that in modern outlet the total cost of value addition was the highest in rice, wheat, greengram, tur dal, and groundnut (Rs 158/qtl) of which packaging occupied the highest cost with Rs 73 per quintal, followed by chemical treatment Rs 45 per quintal, cleaning Rs.35 per quintal and labelling Rs 5 per quintal. In case of raisins and cashewnut, total cost of value addition was Rs 78 per quintal of which packaging occupied the highest of Rs 73 per quintal.

In traditional outlet average total cost of value addition was highest in rice, wheat, greengram, tur dal and groundnut (Rs 93/qntl) of which cleaning occupied the highest cost with Rs 50 per quintal followed by packaging Rs 40 per quintal and labelling Rs.3 per quintal. No value addition in case of groundnut oil and sunflower oil either by modern outlet or by traditional outlet.

4.3.3 Value Addition in Retail Outlets for Selected Food Items

Value addition as a result of processing during the resale of food items for selected retail outlets in Bangalore is presented in Table 4.13. It was observed from the table that in rice sale price per quintal was Rs. 2220 in modern outlets whereas in traditional outlet it was Rs.2060. The 't' value calculated was 2.61and it was significant at 5 per cent. Purchase price in modern outlet was Rs.1570 and in traditional outlet it was Rs.1650. The't' value calculated was -3.14, it was non significant. Cost of processing and packing of rice was Rs. 158 per quintal in modern outlet and it was Rs. 93 in traditional outlet. The 't' value calculated was 3.84 and it was significant at 1 per cent. Net value added and value addition to purchase price was Rs. 492 per quintal and 31.21 per cent respectively in modern outlets and it was Rs. 317 and 19.21 per cent in traditional retail outlet.

For wheat, sale price was Rs. 1940 per quintal in modern outlet whereas in traditional outlet it was Rs. 1780 per quintal. The 't' value calculated was 3.68 and it was significant at one per cent. Purchase price was Rs. 1440 per quintal in modern outlet whereas in traditional outlet it was Rs.1500 per quintal. The't' value calculated was -1.24 and it was non significant. Cost of processing and packing was Rs.158 per quintal in modern outlet and it was Rs. 93 per quintal in traditional retail outlet. Net value added and value addition to purchase price Rs. 342 per quintal and Rs. 23.75 per cent respectively in modern outlet, whereas in traditional retail outlet it was Rs. 187 per quintal and 12.46 per cent respectively.

For greengram, sale price was Rs. 4260 per quintal in modern outlet whereas in traditional outlet it was Rs 3440 per quintal. The 't' value calculated was 10.01 and it was significant at 1 per cent. Purchase price was Rs. 2880 per quintal in modern outlet whereas in traditional outlet it was Rs. 3940 per quintal. The 't' value calculated was -0.98 and it was non significant. The cost of processing and packing was Rs. 158 per quintal in modern retail outlet whereas in traditional retail outlet it was Rs. 93 per quintal. The t value calculated was

Table 4.12. Cost of Preparation of Product in Retail Outlets

(Rs./qtl)

Sl no	Products	MODERN					TRADITIONAL				
		Cleaning	Packing	Chemical treatment	Labelling	Total cost	Cleaning	Packing	Chemical treatment	Labelling	Total cost
1	Rice	35 (22.15)	73 (46.20)	45 (28.48)	5 (3.16)	158	50 (53.76)	40 (43.01)	-	3 (3.22)	93
2	Wheat	35 (22.15)	73 (46.20)	45 (28.48)	5 (3.16)	158	50 (53.76)	40 (43.01)	-	3 (3.22)	93
3	Greengram	35 (22.15)	73 (46.20)	45 (28.48)	5 (3.16)	158	50 (53.76)	40 (43.01)	-	3 (3.22)	93
4	Tur dal	35 (22.15)	73 (46.20)	45 (28.48)	5 (3.16)	158	50 (53.76)	40 (43.01)	-	3 (3.22)	93
5	Groundnut	35 (22.15)	73 (46.20)	45 (28.48)	5 (3.16)	158	50 (53.76)	40 (43.01)	-	3 (3.22)	93
6	Raisins	-	73 (46.20)	-	5 (3.16)	78	-	40 (43.01)	-	3 (3.22)	43
7	Cashewnut	-	73 (46.20)	-	5 (3.16)	78	-	40 (43.01)	-	3 (3.22)	43

Note: Figures in paranthesis indicates percentage to the total
No value addition in case of Groundnut oil and sunflower oil

3.84 and was significant at 1 per cent. The net value added and value addition to purchase price were Rs.1220 per quintal and 42.43 per cent in modern outlet and in traditional outlet it was Rs 707 per quintal and 11.83 per cent respectively.

For tur dal, sale price was Rs. 4700 per quintal in modern outlet and it was Rs. 4450 per quintal in traditional outlet. The 't' value calculated was 4.81 and it was significant at 1 per cent. The Purchase price was Rs. 3900 per quintal in modern outlet, whereas in traditional outlet it was Rs. 3960 per quintal. The 't' value calculated was -1.18 and it was non significant. Cost of processing and packing was Rs. 158 per quintal in modern outlet, whereas in traditional outlet it was Rs. 93 per quintal. The 't' value calculated was 3.84 and it was significant. Net value added and value addition to purchase price was Rs. 642 per quintal and 16.46 per cent in modern outlet whereas in traditional outlet it was Rs. 307 per quintal and 10.02 per cent respectively.

For groundnut, sale price was Rs. 5300 per quintal in modern outlet whereas in traditional outlet it was Rs. 4900 per quintal. The 't' value calculated was 5.56, and it was significant at 1 per cent. The Purchase price was Rs. 4300 per quintal in modern outlet whereas in traditional outlet it was Rs. 4360 per quintal. The 't' value calculated was -0.82. Cost of processing and packing was Rs. 158 per quintal in modern outlet and whereas in traditional outlet it was Rs. 93 per quintal. The 't' value calculated as 3.84 and it was significant at 1 per cent. Net value added was and value addition to purchase price were Rs. 842 per quintal and 19.58 per cent in modern outlet, whereas in traditional outlet they were Rs. 447 per quintal and 10.25 per cent respectively.

For raisins, sale price was Rs. 18,000 per quintal in modern outlet whereas in traditional outlet it was Rs. 17,000 per quintal. The 't' value calculated was 5.66 and it was significant at 1 per cent. The purchase price was Rs. 11,900 per quintal in modern outlet, whereas in traditional outlet it was Rs. 12,900 per quintal. The 't' value calculated was -2.89. The cost of processing and packing was Rs. 78 per quintal in modern outlet whereas in traditional outlet it was Rs. 43 per quintal. The 't' value calculated was 1.43 and was in significant. Net value added and value addition to purchase price were Rs. 6022 per quintal and 50.60 per cent in modern outlet whereas in traditional outlet the same were Rs. 3057 and. 23.69 per cent respectively. For cashewnut, sale price was Rs. 34,000 per quintal in modern outlet and Rs. 31,500 per quintal in traditional outlet. The 't' value calculated was 7.75 was significant, purchase price was Rs. 2600 per quintal in modern outlet whereas in traditional outlet it was Rs. 27000 per quintal 't' value calculated was -2.83 and was insignificant. The cost of processing and packing was Rs. 78 per quintal in modern outlet whereas in traditional outlet it as Rs. 43 per quintal. The 't' value calculated was 1.43 and it was non significant. Net value added and value addition to purchase price were Rs. 7922 per quintal and 30.46 per cent in modern outlet. Whereas in traditional outlet the corresponding figures were Rs. 3,957 per quintal and 14.65 per cent respectively. No value was added either by processing or by packing in the case of groundnut oil and sunflower oil in either traditional or modern outlets.

4.4 Cost and Returns in the Trade by Retail Outlets

4.4.1 Cost and Returns in Marketing of Food Items

4.4.1.1 Modern Outlet

The cost and returns of food items marketed by modern outlet are tabulated and presented in the Table 4.14.

The average quantity of rice and wheat handled by the modern outlet were 21.8 quintals and 0.59 quintals per week respectively. The average purchase price per quintal of rice and wheat were Rs.1570 and Rs.1440 respectively. Total purchase values of those commodities accounting for about 73.41 per cent (Rs.34,226) and 81.09 per cent (Rs.849.6) of the total sale value. The sale price of rice and wheat marketed by retailers were Rs. 2220 and Rs.1940 per quintal respectively.

Among the marketing costs, transportation cost was prominent which constituted 35.55 per cent and 35.58 per cent in rice and wheat respectively. The other important items of marketing cost were labour charges, loading and unloading charges and packaging material cost. These marketing costs incurred in rice were Rs. 763 (24.88%), Rs.654 (21.33%) and

Table 4.13. Value Addition in retail outlets for Selected Products

(Rs/qtl)

Sl No.	Products	Particulars	Units	Modern	Traditional	t-value
1	Rice	Sale Price	Qtls	2220	2060	2.61*
		Purchase Price	Qtls	1570	1650	-3.14^{NS}
		Cost of processing and packing	Rs	158	93	3.84**
		Net Value added	Rs	490	317	-
		Value addition to purchase price	%	31.2	19.21	-
2	Wheat	Sale Price	Qtls	1940	1780	3.68**
		Purchase Price	Qtls	1440	1500	-1.24^{NS}
		Cost of processing and packing	Rs	158	93	3.84**
		Net Value added	Rs	342	187	-
		Value addition to purchase price	%	23.75	12.46	-
3	Greengram	Sale Price	Qtls	426	3440	10.01**
		Purchase Price	Qtls	288	3940	-0.98^{NS}
		Cost of processing and packing	Rs	158	93	3.8**
		Net Value added	Rs	1220	707	-
		Value addition to purchase price	%	42.43	11.83	-
4	Tur dal	Sale Price	Qtls	4700	4450	4.81**
		Purchase Price	Qtls	3900	3960	-1.18^{NS}
		Cost of processing and packing	Rs	158	93	3.84**
		Net Value added	Rs	642	397	-
		Value addition to purchase price	%	16.46	10.02	-
5	Groundnut	Sale Price	Qtls	5300	4900	5.56**
		Purchase Price	Qtls	4300	4360	-0.82^{NS}
		Cost of processing and packing	Rs	158	93	3.84**
		Net Value added	Rs	842	447	-
		Value addition to purchase price	%	13.28	5.09	-

Sl No.	Products	Particulars	Units	Modern	Traditional	t-value
6	Groundnut oil	Sale Price	Qtls	8620	8500	2.45*
		Purchase Price	Qtls	796	8120	-2.53^{NS}
		Cost of processing and packing	Rs	0	0	-
		Net Value added	Rs	0	0	-
		Value addition to purchase price	%	0	0	-
7	Sunflower oil	Sale Price	Qtls	7930	7525	8.27**
		Purchase Price	Qtls	7000	7160	-2.14^{NS}
		Cost of processing and packing	Rs	0	0	-
		Net Value added	Rs	0	0	-
		Value addition to purchase price	%	0	0	-
8	Raisins	Sale Price	Qtls	18000	17000	5.66**
		Purchase Price	Qtls	11900	12900	-2.89^{NS}
		Cost of processing and packing	Rs	78	43	1.43^{NS}
		Net Value added	Rs	6022	3057	-
		Value addition to purchase price	%	50.60	23.69	-
9	Cashew	Sale Price	Qtls	34000	31500	7.75**
		Purchase Price	Qtls	26000	27000	-2.83^{NS}
		Cost of processing and packing	Rs	78	43	1.43^{NS}
		Net Value added	Rs	7922	3957	-
		Value addition to purchase price	%	30.46	14.65	-

Note: Value added due to processing and packing = (Sale Price- Purchase Price-Cost of processing),
NS; Non Significant, *-- Significant at 5%,**-- Significant at 1%

Table 4.14. Cost and Returns in marketing of commodities in Modern Retail outlet

Sl no	Particulars	Commodities								
	Modern retail outlet	Rice	Wheat	Greengr am	Tur dal	Ground nut	Ground Nut oil	Sunflower oil	Raisins	Cashew nut
I	Returns									
1	Quqntity handled(qtls)	21.8	0.59	1.08	1.75	0.95	1.34	2.05	0.058	0.058
2	Average purchase price	1570	1440	2880	3900	4300	7960	7000	11900	2600
3	Total purchase Value(Rs)	34226 (73.41)	849.6 (81.09)	3110.4 (75.3)	6825 (94.24)	4085(94)	10666.4 (92.42)	14350 (88.3)	690.2 (70)	1508 (78.78)
4	Quantity sold(qtls)	21	0.54	0.97	1.7	0.82	1.34	2.05	0.058	0.058
5	Retailers price per quintal(Rs)	2220	1940	4250	4700	5300	8620	7930	18000	34000
6	Total sale Value(Rs)	46620	1047.6	4132.2	7990	4346	11541.2	16256.5	1040	1972
II	Gross Returns over purchase value	12394	295	1021.8	1165	261	874.8	1906.5	353.8	464
III	Marketing cost									
7	Shop rent	9.97 (0.32)	0.22 (0.26)	0.46 (0.3)	0.80 (0.32)	0.38 (0.23)	0.63 (0.92)	0.97 (0.9)	0.03 (0.84)	0.03 (0.84)
8	Transportaion charge	1090 (35.55)	29.5 (35.58)	54 (35.54)	87.5 (35.41)	47.5 (35.57)	67 (98.71)	106.25 (98.75)	2.06 (58.02)	2.06 (58.02)
9	Pakaging cost(Rs)	545 (17.77)	14.75 (17.79)	27 17.78)	43.75 (17.70)	23.75 (17.78)	-	-	1.45	1.45
10	Labour charge (Rs)	763 (24.88)	20.65 (24.90)	37.8 (24.89)	62.25 (25.19)	33.25 (24.9)	-	-	-	-
11	Loading & unloading charge(Rs)	654 (21.33)	17.7 (21.34)	32.4 (21.33)	52.5 (21.24)	28.5 (21.34)	-	-	-	-
12	Miscellaneous (Rs)	3.83 (0.12)	0.09 (0.1)	0.17 (0.11)	0.28 (0.11)	0.14 (0.10)	0.24 (0.35)	0.37 (0.34)	0.01 (0.3)	0.01 (0.3)
13	Total marketing cost	3065.8	153.55	151.83	247.08	133.52	67.87	107.59	3.55	3.55
III	Net Returns	9328.2	199	845	917.92	163.98	806.93	1800.9	350.25	460.45

Note: Figures in the parenthesis indicates percentage

Rs.545 (17.77%) respectively. In wheat the same were Rs.20.65 (24.30%), Rs.17.7 (21.34%) and Rs.14.25 (17.79%) respectively.

The average quantity of greengram, tur dal and groundnut handled by modern outlet were 1.08 quintals, 1.75 quintals and 0.95 quintals per week respectively. The average purchase price per quintal of greengram, tur dal and groundnut were Rs.2880, Rs. 3900 and Rs. 4300 respectively. Total purchase values of these commodities accounting for 75.3 per cent (Rs.3110.4/q), and 94.24 per cent (Rs.6825/q) and 94 per cent (Rs.4085/q) of the total sales value. The sales price per quintal of greengram, tur dal and groundnut marketed by retailers was Rs.4250, Rs.4700 and Rs.5300 respectively.

The marketing costs like transportation cost, labour charges, loading and unloading charges and packaging materials cost in greengram were Rs.54 (35.56%), Rs.37.8 (24.89%), Rs.32.40 (21.33%), Rs.27 (17.78%) respectively. In tur dal the same were Rs.87.5 (35.41%), Rs.62.25 (25.19%), Rs.52.5 (21.24%0 and Rs. 43.75 (17.70%) respectively and in groundnut, the said marketing costs were Rs.47.5 (35.57%), Rs.33.25 (24.9%), Rs.28.5 (21.34%) and Rs.23.75 (17.78%) in that order.

In oils the average quantity of sunflower oil and groundnut oil handled by the modern outlets were 2.05 quintals and 1.34 quintals per week respectively. In raisins and cashewnut an average quantity handled was 0.058 quintals each. The average purchase price per quintal in groundnut oil was Rs.7960 and in sunflower oil it was Rs.7000 and in raisins and cashewnut average purchase price per quintal were Rs.11,900 and Rs.26,000 respectively. Total purchase value of sunflower oil and groundnut oil accounting about Rs.14350 (88.3%) and Rs.10666.4 (92.42%) respectively. The sale price of sunflower oil, groundnut oil, raisins and cashewnut marketed by retailers were Rs.7930, Rs.8620, Rs.18,000 and Rs.34000 per quintal respectively. In sunflower and groundnut oil only transportation costs were included as marketing cost and the same were Rs. 106.25 and Rs.67 representing 98.75 and 98.71 per cent of total marketing cost respectively. In raisins and cashewnut only transportation cost and packaging cost were the major marketing costs which contributed Rs.2.06 (58.02%) and Rs.1.45 (58.02%) respectively.

The gross returns over purchase value in rice was Rs.12,394, in sunflower oil was Rs. 1906.51, in greengram was Rs.1021.81, in groundnut oil was Rs. 874.8, in tur dal was Rs.1165.0, in cashewnut was Rs.464, in raisins was Rs.353.8, in wheat was Rs.295 and in groundnut it was Rs.261.

Net returns was maximum in rice and it was Rs.9328.2, followed by in sunflower oil (Rs.1800.9), greengram (Rs.845), groundnut oil (Rs.806.93), cashewnut (Rs.460.45), raisins (Rs.350.25), wheat (Rs.208.8), groundnut (Rs.163.98) and tur dal (Rs.153.1) respectively.

4.4.1.2 Traditional outlet

The cost and returns of food items marketed by traditional retail outlet are tabulated and presented in the Table 4.15.

In rice and wheat average quantity handled per week by the traditional outlet were 16.8 quintals and 0.63 quintals respectively. The average purchase price per quintal of rice and wheat were Rs. 1650 and Rs.1500 respectively. Total purchase value of these commodities accounting about 81.95 per cent (Rs.27,720) and 88.48 per cent (Rs.945) respectively of the total sale value. The sale price of rice and wheat marketed by traditional retailers were Rs.2060 and Rs.1780 respectively.

The average quantity of greengram, tur dal and groundnut handled by retailers were 0.7, 1.3 and 0.9 quintals per week respectively. The average price per quintal of greengram, tur dal and groundnut were Rs.2940, Rs. 3960 and Rs.4360 respectively. Total purchase value of these commodities accounting about 82.12 per cent (Rs.2058), 92.54 per cent (Rs.5148), 91 per cent (Rs.5148) respectively of total sales value. The retailers price per quintal for these commodities were Rs.3740, Rs. 4450, Rs.4900 respectively.

Marketing cost included transportation cost, packaging material cost, labour charges, loading and unloading charges and there were Rs. 756 (29.90%), Rs.420 (6.61%), Rs.840 (33.22%) and Rs.504 (19.93%) in rice respectively. In wheat the same were of the order of Rs.28.35 (29.91%), Rs.15.75 (16.61%), Rs.31.5 (33.23%) and Rs. 18.90 (19.94%) respectively. For greengram the corresponding figures were 29.91 per cent (Rs. 31.50), 16.61

Table 4.15. Cost and Returns in marketing of commodities by Traditional Retail outlet

Sl no	Particulars	Commodities								
	Modern retail outlet	Rice	Wheat	Greengr am	Tur dal	Ground nut	Ground Nut oil	Sunflower oil	Raisins	Cashewnut
I	Returns									
1	Quantity handled(qtls)	16.8	0.63	0.7	1.3	0.9	0.95	1.55	0.032	0.032
2	Average purchase price	1650	1500	2940	3960	4360	8120	7160	12900	27000
3	Total purchase Value(Rs)	27720 (81.55)	945 (88.48)	2058 (82.12)	5148 (92.54)	3924 (91.00)	7714 (95.52)	11098 (95.14)	412.8 (73.71)	864 (81.81)
4	Quantity sold(qtls)	16.5	0.6	0.67	1.25	0.88	0.95	1.55	0.032	0.032
5	Retailers price per quintal(Rs)	2060	1780	3740	4450	4900	8500	7525	16000	31000
6	Total sale Value(Rs)	33990	1068	2505.8	5562.5	4312	8075	11663.75	512	992
II	Gross Returns Over purchase Value	6270	123	447.8	414.5	388	361	565.75	99.2	128
III	Marketing cost									
7	Shop rent	4.74 (0.002)	1.16 (0.002)	0.2 (0.002)	0.36 (0.002)	0.25 (0.002)	0.27 (0.006)	0.44 (0.006)	0.009 (0.005)	0.009 (0.005)
8	Transportation charge	756 (29.90)	28.35 (29.91)	31.5 (29.9)	58.5 (29.92)	40.5 (29.90)	42.75 (98.91)	69.75 (98.92)	1.12 (58.03)	1.12 (58.03)
9	Packaging cost(Rs)	420 (16.61)	15.75 (16.61)	17.5 (16.61)	32.5 (16.61)	22.5 (16.61)	-	-	0.8 (41.45)	0.8 (41.45)
10	Labour charge (Rs)	840 (33.22)	31.5 (33.23)	35 (33.22)	65 (33.25)	45 (33.22)	-	-	-	-
11	Loading & unloading charge(Rs)	504 (19.93)	18.9 (19.94)	21 (19.93)	39 (19.94)	27 (19.93)	-	-	-	-
12	Miscellaneous (Rs)	3.5 (0.13)	0.12 (0.12)	0.14 (0.13)	0.26 (0.13)	0.2 (0.14)	0.2 (0.46)	0.32 (0.45)	0.006 (0.31)	0.006 (0.31)
13	Total marketing cost	2528	94.78	105.34	195.4	135.45	43.22	70.51	1.93	1.93
III	Net Returns	3742	28.22	342.46	219.0	252.55	317.78	495.24	97.27	126.07

Note: Figures in the parenthesis indicates percentage

per cent (Rs.17.50), 33.22 per cent (Rs.35.0) and 19.94 per cent (Rs.21.00) respectively. For tur dal the same were of the order of 29.92 per cent (Rs. 58.5), 16.6 per cent (Rs.32.5), 33.25 per cent (Rs.65.0) and 19.93 per cent (Rs.39.0) and groundnut were 29.9 per cent (Rs.40.5), 16.61 per cent (Rs.22.5), 33.22 per cent (Rs.45.0) and 19.93 per cent (Rs. 27.0) of the total marketing cost. Total cost for rice and wheat were Rs.2528 and 94.78 respectively and for greengram,, tur dal, groundnut total costs were Rs.105.34, Rs.195.46 and Rs.135.45 in that order. Gross returns over purchase value for rice and wheat were Rs.6270 and Rs.123 respectively and for greengram, tur dal and groundnut the same were Rs.447.8, Rs.414.5 and Rs.388.0 respectively. Net returns for rice and wheat was Rs.3742 and Rs.28.22 and for greengram, tur dal and groundnut they were Rs.342.46, Rs.219.05 and Rs.252.55 in that order.

In oils the average quantity of groundnut and sunflower oil handled by the traditional outlet were 0.95 quintals and 1.55 quintals respectively. In raisins and cashewnut the average quantity handled were 0.032 quintals each. The average price per quintal for groundnut oil and sunflower oil were Rs.8120 and Rs.7160 respectively. For raisins and cashewnut the same were in the order of Rs.12,900 and 27,000. Total purchase value of oils was maximum in sunflower oil accounting about 95.14 per cent (Rs.11,098) of total sale value and it was 95.52 per cent (Rs.7714) in the case of groundnut. In case of raisins and cashewnut total purchase value was maximum in cashewnut accounting about 81.81 per cent (Rs.864) and in raisins it was 73.71 per cent (Rs. 412.8) of the total sale value. In case of sunflower oil and groundnut oil transportation cost incurred were Rs.69.75 (98.92%) and Rs.42.75 (98.91%) respectively. Whereas in raisins and cashewnut transportation cost and packaging costs were the major marketing costs which contributed about 58.03 per cent (Rs. 1.12) of the total marketing cost for each. Gross returns over purchase value for sunflower oil and groundnut oil were Rs.567.75 and Rs.361 respectively. Whereas in case of raisins and cashewnut gross returns over purchase value were Rs.99.2 and Rs.128 respectively.

Net returns earned by traditional retailers for sunflower oil and groundnut oil were Rs. 495.25 and Rs.317.78 respectively and for raisins and cashewnut the same were in the order of Rs.97.27 and Rs. 126.07.

In traditional outlet among different marketing costs, cost incurred was maximum in labour charges followed by transportation, loading and unloading and packaging cost. Total cost was maximum in rice and it was less in raisins and cashewnut.

4.4.1.3 Comparison of Retail Business between Modern and Traditional Outlets

Comparison of retail business between modern and traditional retail outlets is depicted in Table 4.16. The average quantity handled by the modern retailers at an aggregate level was maximum (3.29 quintals) compared to traditional retailers (2.54 quintals). The average total purchase value in modern retail outlets was higher (Rs.8478.95) compared to traditional retail outlets (Rs.6570.2).

Average total sale value in modern retail outlets was to the tune of Rs.10453.9 compared to traditional retail outlets, where it was 7643.6. The average gross return over purchase value retained by modern retail outlets and traditional retail outlets was Rs. 1985.76 and Rs. 989.91. The average total marketing cost incurred by modern retailers and traditional retailers at aggregate level was of the order of Rs.429.3 and Rs. 352.95. Average net returns was found to be more in case of modern retail outlets i.e., Rs.1555.73 compared to traditional retail outlets i.e., Rs. 636.96.

From the above data, it is clear that the modern retailers were the highest beneficiaries in business as compared to traditional retailers.

Table 4.16. Comparison of Retail Business between Modern and Traditional Outlet

Sl No	Particulars	Type of Retail outlet	Commodities									
			Rice	Wheat	Green gram	Tur dal	Ground nut	Ground nut oil	Sunflower oil	Raisins	Cashew nut	Aggregate average
1	Quantity Handled(qtls)	Modern	21.8	0.59	1.08	1.75	0.95	1.34	2.05	0.058	0.058	3.29
		Traditional	16.8	0.63	0.7	1.3	0.9	0.95	1.55	0.032	0.032	2.54
2	Total purchase Value(Rs)	Modern	34226	849.6	3110.4	6825	4085	10666.4	14350	690.2	1508	8478.95
		Traditional	27720	945	2058	3960	4360	7714	11098	412.8	864	6570.2
3	Total sales Value(Rs)	Modern	46620	1047.6	4132.2	7242	4346	11541.2	16256.5	986	1914	10453.9
		Traditional	33990	1068	2505.8	5562.5	4312	8075	11663.75	560	1056	7643.6
4	Gross returns Over purchase Value(Rs)	Modern	12394	295	1021.8	417	261	874.8	1906.5	295.8	406	1985.76
		Traditional	6270	123	447.8	414.5	388	361	565.75	147.2	192	989.91
5	Total marketing Cost(Rs)	Modern	3065.8	82.91	151.83	247.08	133.52	67.87	107.59	3.55	3.55	429.3
		Traditional	2528	94.78	105.34	195.4	135.45	43.22	70.51	1.93	1.93	352.95
6	Net returns(Rs)	Modern	9328.2	208.8	845	153.1	163.98	806.93	1800.9	292.25	402.45	1555.73
		Traditional	3742	28.22	342.46	219.05	252.55	317.78	495.24	145.27	190.07	636.96

4.5 Factors Influencing the Consumer Behavior of Consumers who Purchase Through Retail Outlets

4.5.1 Factors Influencing on Consumer Behavior to Purchase in Retail Outlets

In this section, results of the opinion of the consumers to go for purchase at the retail outlets in the study area were collected using three point scale technique based on their opinion. The opinions obtained in terms of scores(i.e., three points scale) from the consumers were analyzed using t-test and results of the analysis are presented in Table 4.17.

The variables like convenient location of the shop, convenient for purchase and working women convenience had mean value scores of 2.5, 2.41, 2.40 respectively in modern outlet and in traditional outlet mean score values were 2.4, 2.48 and 2.3 respectively. The 't' value calculated for these variables were 0.77, -0.52 and 0.80 respectively and were non-significant. Hence there is no significant difference between modern and traditional retail outlets.

In case of packing, schemes and offers, attractive advertisement, store image and labeling had mean score value of the corresponding 2.17, 1.66, 1.57, 2.50 and 2.03 respectively in modern outlets and in traditional retail outlets mean score values were 0.03, 0.41, 0.25, 0.07, 0.38 respectively. The 't' value calculated for these factors were 3.82, 4.06, 4.85, 4.26 and 2.60 respectively and they are significant at 1 per cent. Hence, there is a significant difference between modern and traditional retail outlets.

In case of service to customers, behaviour of the employees and availability of quality products, mean score values in modern outlets were 2.43, 2.30 and 263 respectively. Mean score values for these variables in traditional outlets were 2.23, 2.30 and 2.40 respectively and 't' values calculated for these variables were 1.53, and 1.83 respectively and significant at 5 per cent, except behaviour of employees where the 't' value was insignificant.

In variables like parking facility and home delivery, the mean score values for these variables in modern outlets were 2.33 and 2.00 respectively and in traditional form mean score values for these variables were 1.83 and 1.40 respectively. The 't' value calculated were 2.95 and 2.70 respectively and were significant at 1 per cent. In case of range of products available mean score value in modern outlet was 2.97 and in traditional outlet it was 2.77, with 't' value of 2.34 which was significant at 1 per cent level.

In case of reasonable price mean score value in modern outlet was 1.63 and in traditional outlet it was 1.67, 't' value calculated for this variables was -0.27 and it was non significant.

In case of payment method, no significant difference between modern and traditional outlet. In modern outlet mean score value was 2.33 and in traditional outlets it was 2.67 with 't' value calculated for this variable was -1.49 and was non significant.

In variable, shopping is seen as enjoyable, the mean score value in modern outlet was 2.33 and 0.83 in traditional outlet and 't' value calculated was 3.6, it was significant at 1 per cent, there is a significant difference between modern and traditional outlet.

In case of save time of shopping, in modern outlet mean score value was 2.66 and in traditional outlet it was 2.13. The calculated 't' value calculated was 3.7 and it was significant at 1 per cent. Hence, there is a significant difference between modern and traditional outlets.

While in case of frequency of visit, mean score value in modern outlet was 2.43 and it was 2.23 in traditional outlet. The 't' value calculated was 1.23 and was non significant. Hence there is no significant difference between modern and traditional outlets.

Table 4.17. Factors influencing on consumer behaviour

	Variables	Modern (n=30)		Traditional (n=30)		t-value
		Mean	SD	Mean	SD	
1	Convenient location of the shop	2.5	0.51	2.4	0.49	0.77^{NS}
2	Convenient for purchase	2.41	0.50	2.48	0.509	-0.52^{NS}
3	Working women convenience	2.4	0.498	2.3	0.466	0.8^{NS}
Note: Most Convinient-3, Convinient-2, Less convenient-1						
4	Packing	2.17	0.02	1.77	0.03	3.82**
5	Schemes and offers	1.66	0.48	1.2	0.41	4.06**
6	Attractive advertisement	1.57	0.50	1.07	0.25	4.85**
7	Store image	2.5	0.07	1.93	0.07	4.26**
8	Labelling	2.03	0.18	1.83	0.38	2.6**
Note: Highly attractive-3, Attractive-2, Less attractive-1						
9	Service to customers	2.43	0.50	2.23	0.50	1.53*
10	Behaviour of the employees	2.3	0.47	2.3	0.53	0^{NS}
11	Availability of quality product	2.63	0.60	2.4	0.06	1.83*
Note: Very good-3,Good-2, moderately good-1						
12	Parking facility	2.33	0.66	1.83	0.64	2.95*
13	Home delivery	2	0.91	1.4	0.81	2.7*
Note: Adequately available-3, Available-2, Less available-1						
14	Range of products available	2.97	0.18	2.77	0.43	2.34*
Note: Wide Range-3, Averagr-2, Very narrow-1						
15	Reasonable Price	1.63	0.49	1.67	0.49	-0.27^{NS}
Note: Highly reasonable-3, Moderately reasonable-2, Less reasonable-1						
16	Payment method	2.33	0.84	2.67	0.57	-1.49^{NS}
Note: Cash-3, Cheque-2, Credit card-1						
17	Shopping is seen as enjoyable	2.33	0.48	1.7	0.83	3.6*
Note: Highly enjoyable-3, Enjoyable-2, Less enjoyable-1						
18	Save time of shopping	2.66	0.48	2.13	0.63	3.7*
Note: More-3, Medium-2, Less-1						
19	Frequency of Visit	2.43	0.57	2.23	0.67	1.23^{NS}
Note: Regularly-3, Weekly-2, rarely-1						

Note; NS- Non significant, *- Significant at 5%, **- significant at 1%

5. DISCUSSION

The findings of the study, which were presented in previous chapter are discussed in this chapter under the following heading to arrive at a meaningful interpretation.

5.1 Procurement management and inventory management

5.2 Investment pattern in retail outlets

5.3 Cost of value addition in retail outlets

5.4 Cost and returns in the trade by retail outlets

5.5 Factors influencing the consumer behaviour in purchase made in retail outlets

5.1 Procurement Management and Inventory Management

5.1.1 Procurement of Food Items by Modern Outlets

It was revealed from Table 4.1, that among grocery items, the average frequency of purchase was once in a week. Among the groceries, rice was procured in highest (21.8 qtls) quantity followed by tur dal (1.75 qtls) and greengram (1.08 qtls). But procurement of wheat was not in proportion to rice. It is not that the wheat consumption is less. People find it convenient to use wheat flour rather than whole wheat which has to be ultimately floured again. Hence whole wheat procurement was less as such. The quantity of purchase in cereals and pulses was high because of the high turnover and demand from the consumers as these were the daily use items. All the grocery items were procured by the traders in Agricultural Produce Market Committee.

Among oils, sunflower oil procured was more (2.05 qtls) followed by groundnut oil (1.34 qtls). High demand for sunflower oil was natural due is lower per unit price and also the people of Bangalore are much health conscious. They demand less cholesterol containing cooking oil and hence demand more of sunflower oil. Hence, the retail outlets procure more of sunflower oil to meet consumer demand. On an average, the frequency of purchase was once in a week, barring the case of raisins and cashewnut where in they were procured once in 15 days. Hence the weekly procurement frequency for these two items arrived to be 0.5. Quantity of purchase of raisins and cashewnut were also less, because of their lesser demand. Oils, raisins and cashewnuts were purchased from distributors.

5.1.1.2 Traditional outlet

The weekly purchase frequency of groceries and oils in traditional outlets was also once in a week as that of modern outlets. The procurement behaviour with regard to raisins and cashewnut also did not change between the two categories outlets studied, as here also the outlet owners procured them once in a fort night. Except oils, raisins and cashewnuts all the grocery items were procured from Traders in APMC. Oils in plastic containers and sachets and raisins and cashewnuts were supplied directly to the stores by the distributors.

The higher procurement in case of oils was observed in sunflower oil (1.55 qtls) and groundnut oil (0.55 qtls) depending upon the demand for these products.

It was also reported that the APMC was the only source of purchase for grocery products for both traditional and modern outlets as it is the only governing body for marketing of agricultural commodities, in the region.

5.1.2 Cost Incurred in Procurement of Food Items by Retail Outlets

5.1.2.1 Modern outlets

It could be seen from the Table 4.3 that the average weekly costs incurred in procurement of food items by modern outlets in Bangalore city. Among grocery items, rice accounts for highest total cost (Rs. 37278) in procurement followed by tur dal (Rs.7070), groundnut (Rs.4218), greengram (Rs. 3261.6) and wheat (Rs.932.2) wherein the quantity purchased was 21.8 quintals in rice, 1.75 quintals in tur dal, 0.95 quintals in groundnut, 1.08 quintals in greengram, 0.59 quintals in wheat. It was found from the study that next to price of the product, transport costs, labour charge for cleaning and weighing, loading and unloading

charge and packaging material costs were the prime cost in procurement. Transportation cost, labour charges for cleaning and weighing, loading and unloading cost and packaging material cost were found maximum in rice because rice was procured in high quantity. Cost per quintal was found to be maximum in groundnut. Labour charges for cleaning and packing were found to be less in modern outlets as compared to traditional outlets. Modern outlets employ machines for cleaning while in traditional outlets it was done manually by employing human labour.

As in the case of groceries, transportation were also found to be the prime cost in oils also. Transport cost was high in sunflower oil, because quantity of procurement itself was high in sunflower.

In oils, labour charges, packaging material costs and loading and unloading charges were not found because they were procured from distributors in packed form, directly at the door steps of the outlets. Since, these materials were supplied in packed form there was no cost of packaging as well as cleaning.

In raisins and cashewnut transportation costs was found to be less because quantity purchase of these items was less as it was demanded in small quantity and it was procured from the distributors. The distributors supply the commodity through bus or in their own vehicle. So transportation cost incurred on raisins and cashewnut was less. Packaging material costs and cleaning cost were also found to be less in raisins and cashewnut as they were cleaned and packed at distributors level.

5.1.2.2 Traditional outlets

The weekly costs incurred in procurement of selected food items by traditional retail outlets depicted in Table 4.4 shows the highest total cost was accounted by rice (Rs.30240) due to its highest quantity purchased. Based on the quantity purchased, the proportion of transport cost, cleaning and weighing charge, loading and unloading charges and packaging material costs were also serge high.

In oils highest procurement was seen in sunflower oil (1.55 qtls) and less in groundnut oil (0.95 qtls), thus the total cost were also high (Rs.11167.75 and Rs.7756.75) in respective commodities. The transport costs were more in sunflower oil because of the reason already discussed.

Among resin and cashewnut, highest total cost was accounted by cashewnut (Rs.865.92) because of its high unit cost as compared to raisins. Transportation cost and packaging material costs were found to be Rs. 1.12 and Rs.0.8 respectively in both raisins and cashewnut.

5.1.2.3 Comparison of Mean Value of Procurement Costs between Modern and Traditional Retail Outlets

Comparison of mean value of procurement costs between modern and traditional outlets is presented in Table 4.5. Mean value for rice and wheat in modern outlet were Rs.1710 and Rs.1580 respectively and in traditional outlet they were Rs. 1800 and Rs.1650 respectively. The ‘t’ values calculated were in significant for both rice and wheat which indicated that there was no significant difference in the value of procurement cost between modern and traditional retail outlets. The procurement cost differentials would be attributable to the source of supply and mode of supply. Since, for both type of outlets, viz, traditional and modern, the source of supply, and the mode of supply being the same, their could not be any significant difference in the value of procurement. Similar observations were seen in the cases of pulses, oils, raisins and cashewnut between the two type of outlets studied.

5.1.4 Inventory Management

Inventory refers to stocks of products, which represents a higher portion of the business investment and must be well managed in order to maximize profits. Raw material inventory, work in process inventory, finished product inventory and work in sales inventory, represent the various forms of inventories maintained by the retail outlets.

The major costs involved in maintaining inventories in retail outlets were shrinkage value, labour charges and packing material charges.

5.1.4.1 Weekly Inventory Management in Retail Outlets

5.1.4.1.1 Modern Outlets

The weekly inventory management in modern retail outlet presented in Table 4.6 revealed that modern retail outlets maintained short time period inventories in almost all the commodities. The cost of carrying inventory would be very high and also there would be a risk of spoilage of the commodities if they were stored for long as these were perishable commodities. Therefore the retail outlets found if convenient to maintain inventories for short period.

These reports are on par with the results obtained by Farned and Lebruto (1993). They reported that the consequences of overstocking items (or) under stocking were undesirable. Overstocks absorb money and invite waste in food inventory management. Further from better inventory management controls to new loss prevention methods, retailers are integrating more technology initiatives into their operations to run more efficient stores. The results in the study also in conformity with the results of the above researchers.

In groceries, particularly in cereals, pulses and in oils the inventory period was 6 days. While in case of raisins and cashewnut the period was 13 days because these were slow moving items and were procured once in two weeks.

The volume of inventories found to be high in rice (21.8 qtls) followed by tur dal (1.75 qtls), greengram, (1.08 qtls), groundnut (0.95 qtls) and wheat (0.59 qtls) based on their turnover in turn due to customer demand for essential and daily use items. The finished product inventory was observed to be highest both in terms of quantity and storage period as the business involves quick conversion of inventories and hence the managers must formulate plans to ensure enough inventories on hand for production of finished product. The finished product stock was 8.65 quintals in rice valued at Rs.14791.5, 0.69 quintals in tur dal valued at Rs.2828, 0.42 quintals in greengram valued at Rs.1268, 0.4 quintals in groundnut valued at Rs.1776 and 0.24 quintals in wheat valued at Rs.379.2. All these commodities held for 2.5 days in finished product at work in sales inventory and raw material inventory. The work in sales inventory should be maintained to retain the prospective customers from the psychological point of view. However, the work in sales inventory in rice was 5.86 quintals, 0.48 quintals in tur dal, 0.31 quintals in greengram, 0.30 quintals in groundnut and 0.16 quintals in wheat. In work in sale inventory stage commodities held for 2 days in all the products. The storage period of work in process inventory was low (less than a day) in almost all the products because as soon as the raw material was received, they will subject the material to work in process to make it ready for the finished product stage.

In case of inventory costs, the packaging material and labour charges for cleaning and packing were found to be the major cost component in all the commodities. Packaging is an important cost component in modern outlets inventory as it involves costs in getting good quality packing material which should have good appearance, durable and printable form to deliver the production in an exciting presentation with differences in size and weight of packets with their own brand names. However, labour charge and packaging material cost per quintal were Rs.18.75 and Rs.28.96 in rice, Rs.18.98 and Rs.29.69 in wheat, Rs.18.14 and Rs.28.38 in greengram, Rs.18.4 and Rs.28.6, in tur dal and Rs. 18.42 and Rs.20.73 in tur dal.

The minor costs included the shrinkage value. Shrinkage costs per quintal were Rs. 17.18 in rice, Rs.15.76 in wheat, Rs.30.16 in greengram, Rs.40.4 in tur dal and Rs.44.23 in groundnut.

In oil the quantity of inventories maintained and their values were high in sunflower oil (1.58 quintals valued at Rs.11139) and low in groundnut oil (1.02 quintals valued at Rs.8170.2).

In groundnut oil and sunflower oil maximum quantity was stored in finished product inventory for 3 days. Next to the finished product inventory, items were stored in work in sales inventory for 3 days. There is no raw material inventory and work in process inventory in case for sunflower oil, groundnut oil, raisins and cashewnut. These items were procured from distribution in the finished form. In groundnut oil and sunflower oil only shrinkage value was considered as cost component, packaging material cost and labour charges were not

included since they procured in packed form. However, shrinkage value per quintal was Rs.20.01 in groundnut oil and Rs.17.66 in sunflower oil.

In the case of raisins and cashewnut, volume of inventory was found to be same (0.058 qtls). Usually, these products were supplied in packed form directly form the distributors. Here finished product inventory was held for a period of 7 days and work in process inventory was held for 6 days. Shrinkage values per quintal were Rs.29.65 in raisins and Rs.64.82 in cashewnut.

5.1.4.1.2 Traditional Outlets

Weekly inventory management in traditional outlets presented in Table 4.7 revealed that storage period of inventories was 5.5 days in all food items except raisins and cashewnut where in storage period was 12 days.

The quantity and value of groceries was high in rice (16.8 qtls) followed by tur dal (1.3 qtls), groundnut (0.9 qtls), greengram, (0.7 qtls) and wheat (0.61 qtls). The maximum quantity of inventory was held in finished product stage in all commodities as in case of modern retail outlets. However, the finished quantity maintained were 6.06 quintals in rice for 2 days, 0.23 quintals in wheat for 2 days, 0.26 quintals in greengram for 2 days, 0.48 quintals in tur dal for 2 days and 0.33 quintals in groundnut for 2 days. The work in process inventory accounted for less quantity and minimum storage period in almost all commodities. Labour charge and packaging material cost were major cost components. Shrinkage cost was observed to be more in groundnut (Rs 67.64 per quintal) because of its higher unit cost.

In case groundnut oil and sunflower oil, quantity and wake of inventory was more in sunflower oil (1.5 qtls and Rs. 11,787.7). Sunflower oil ws held at finished product inventory for maximum duration (3 days). The quantity of groundnut oil held in finished product inventory was 0.71 quintals for 3 days. The work in sales inventory was 0.55 quintals in sunflower oil and 0.71 quintals in groundnut oil as it was an important stage and attract customers and to retain them. However, shrinkage values were Rs.18.89 per quintal in sunflower oil and Rs.20.29 per quintal in groundnut oil.

In case of raisins and cashewnut, quantity of inventory was 0.032 quintals each. Quantity held in finished product inventory and work in sales inventory was 0.016 quintals in both cashewnut and raisins. Shrinkage value per quintal was Rs.31.87 in raisins and Rs.69.5 in cashewnut.

5.1.4.1.3 Components of Inventory Cost in Modern and Traditional Retail Outlets for Food Item

Comparison of components of inventory cost in modern and traditional retail outlets for food items depicted in the Table 4.8 indicated that, packaging material cost per quintal was maximum in modern outlet as compared to the traditional outlet (Rs.28.96 in rice, Rs.29.69 in wheat, Rs.28.38 in greengram, Rs.28.61 in tur dal, Rs.30.73 in groundnut and Rs.36.37 in raisins and cashewnut). It involves cost in getting good quality packing material which should have good appearance, durable and in printable form to deliver the products in an exciting presentation with differences in size and weight of packets with their own brand names. Most of the modern retail outlets have their own brand name which creates an image in the minds of customer in turn help in attracting them. Labour charge for cleaning and packing was accounted to be more in traditional outlet compared to modern retail outlet. In traditional outlets cleaning and packing activities were done by employing manual labour, while in modern outlets these activities were performed by employing machineries.

Shrinkage values were observed to be less in modern outlet as compared to traditional outlet, because of the reason that in modern outlets there will be a better management of stock as compared to traditional outlet.

In case sunflower oil and groundnut oil labour charges and packaging material costs were not included. Since, these items were supplied to the outlet in packed form and hence they do not require any cleaning process.

5.1.4.1.4 Comparison of Mean Value of Inventory Costs between Modern and Traditional Retail Outlets

Comparison of mean value of inventory costs between modern and traditional outlets was predicted in Table 4.9. Mean value for rice and wheat were Rs. 211.28 and Rs.206.02 repsectively and in traditional outlet they were Rs. 248 and Rs.238.32. The 't' value calculated were inisignificant for both rice and wheat which indicated that there was no significant difference in value of inventory cost between modern and traditional outlet in inventory cost. There was no much difference in cost component like labour charge, packaging material cost and shrinkage value etween modern and traditional retail outlets.

5.2 Investment Pattern in Retail Outlets

Analysis of the investment of modern and traditional retail outlets presented in Table 4.10,signifies that the average area of the retail outlets in Bangalore city were found to be 4200 sq. ft. in modern outlet and 3500 sq.ft in traditional retail outlet. The area was high due to more transaction, range of products and more spacious to attract consumers in modern retail outlets. The average total fixed cost per sq.ft was Rs. 941.77 for modern retail outlet it which accounted for 95.81 per cent of the total capital. In case of traditional retail outlet the total fixed capital costs Rs.718.58 accounted for 95 per cent from the total capital.

Investment on land in modern outlets occupied nearly 81.4 per cent (Rs.766.66/sq.ft) as they were located in prime area and hence fetched premium price, whereas cost of land in case of traditional retail outlet was comparatively less (Rs. 674.28 per sq. foot). The fixed capital investment on machineries and equipments in modern retail outlet was more as compared to traditional retail outlets. The modern retail outlets employed modern machinery and equipments for cleaning and packing purposes which usually cost more while traditional outlets mostly relied upon the human labour or cheaper machinery for the operations.

The remaining fixed capital element were building, infrastructure, other fixtures and other fixed capital which accounted for Rs. 16.26, Rs. 16.52, 22.25 and RS. 0.31 per square foot respectively in modern retail outlet and Rs. 6.2, Rs. 10.86, Rs. 13.24 and Rs. 0.29 per square foot l traditional retail outlet.

In case of working capital, raw materials were the prime item of costs which contributed about 47.5 per cent of the total working capital as the retailing business itself was to reselling of commodities and quicker conversion of inventory into costs in modern outlet, whereas in traditional outlet it was 54.5 per cent of the total working capital. The other important working capital incurred in establishment of retail outlets were salary to employers, power charges, packaging material and other miscellaneous investments.

At an overall level, the total capital required to establish modern retail outlets was Rs.982.9 per square foot and for traditional retail outlet it was Rs. 756.33. The higher costs in modern retail outlets was due to higher labour cost, social security to employees, high quality real estate, much bigger premises, comfort facilities such as air-conditioning, backup power supply, taxes etc. On the other hand, traditional retail outlets were of low cost structure, mostly owner-operated, has negligible real estate and labour costs and little or no taxes to pay.

5.3 Cost of Value Addition in Retail Outlets

5.3.1 Extent of Activities Undertaken in Preparation of the Product for Sale in Retail Outlets

The results of the Table 4.11 reveal that the most of the retailers took up various activities like cleaning grading, packing and labeling, cleaning and packaging activities were undertaken by cent per cent of the traditional outlets, while only 20 per cent of them under taken grading and only 40 per cent of them go for labeling in case of grocery products. In modern outlets it was seen that along with cleaning and packaging, they give much emphasis for grading as well as labeling. In the case of dry fruits also the situation was more or less same. Grading and labeling the producs add use value to the products and provides identity to the outlets. The modern retail outlets cashed on that it was necessary for them to attract more consumers towards their store. In addition this was one of the marketing strategies by

which they can show case themselves superior from the lot. On the other hand such activities would result in market segmentation with price differentiation.

5.3.2 Cost of Preparation of Product in Retail Outlets

The per quintal total cost of preparation of the product in traditional outlet was less (Rs. 93/q) as compared to modern outlet (Rs. 158/q) in the case of groeceries. Thought he per quintal cleaning cost was less in modern outlets due to mechanized cleaning, the margin was offset because of higher packing and labeling charges. Added to that the modern outlets go for chemical treatments like fumigation etc. before packing the material. This would add to the total cost of preparation at the product. Hence the cost of preparation in modern outlet was higher than traditional outlets. Similar observations were made with respect to raisins and cashewnut.

5.3.3 Value Addition in Retail Outlets for Selected Products

Comparison of net value added will speak off the efficiency of the business. In the case of modern retail outlets the net value added was much higher than the traditional retail outlets in all the grocery items. The higher value addition in modern retail outlets was attributable to the grading, packaging, labeling and chemical treatments done to present the products in much qualitative way. These attributes were of some lower order in traditional outlets. In case of oils no value addition was possible as these products were supplied by the distributors in packets or sachets. In raisins and cashewnut s the net value added were of higher order as compared to grocery items.

5.4 Cost and Returns in Marketing of Food Items

5.4.1 Modern Retail Outlet

The total purchase value out of total sale value were more than 90 per cent in the case of tur dal, groundnut and groundnut oil and around 88 per cent in the case of sunflower oil. That indicates that the gross margin was less in these commodities. On the other hand in rice, wheat, greengram, raisins and cashewnut the proportion of purchased value was around 70-75 per cent indicating higher margin of gross returns.

Gross margin alone cannot decide the profit earned in marketing of any food item by the retail outlets. The marketing costs are to be taken out from gross returns to know the profitability in each food item sold. Among the marketing costs, transportation charge, labour charges, loading and unloading charges and packaging cost were the major components of marketing cost which acts away nearly 99 per cent of the marketing cost in the case of grocery items. While in oils, raisins and cashewnut, transportation cost was the major cost component.

The cost structure analysis done here would be of great use to these modern outlets to decide about strategies to reduce these costs.

5.4.2 Traditional Outlets

In traditional retail outlet also the pattern of costs and returns remained same as that of modern retail outlets. Here also the margin of gross returns were less in turdal, groundnut, groundnut oil, sunflower oil and wheat, as the total purchase value form major proportion (more than 88%) of the total sale value. Hence, the gross returns shrink in selling these items. In rice and greengram the gross returns were higher. In raisins and cashewnut though the proportion of purchase value was less (less than 82%) out of total sale value, the quantum of sale itself was very less. The gross returns was less in absolute terms.

The marketing costs followed the same pattern as that of modern outlets. The results as indicated by net returns would guide these traditional retail outlets to construct their sales mix so that the profit would be higher.

5.4.3 Comparison of Retail Business between Modern and Traditional Outlets

Table 4.16 showed that the average quantity handled by modern retailers was maximum as compared to traditional retailers. The average total purchase value per quintal in modern retail outlet was less as compared to the traditional retail outlets. The average quantity sold by modern retailers was more as compared to traditional retailers because of high turnover. Average sale value per quintal in modern retail outlets was high (Rs. 10453.94) compared to traditional retail outlets (Rs.7643.60). This is mainly due to high investment and more processing cost in modern retail outlets. The average gross return per quintal realized by modern retail outlets was maximum (Rs. 1985.76) as compared to traditional retail outlets (Rs.989.91).

It is interesting to note that modern retail outlets gained higher profit (Rs.1555.73) compared to traditional retail outlets (Rs.636.96). Since, retailers undertook retailing business of several commodities and there was a quick turnover of business in modern retail outlet and hence economics in costs were achieved by them.

5.5 Factors Influencing the Consumer Behaviour in Purchase made in Retail Outlets

5.5.1 Factors Influencing the Consumer Behaviour to Purchase the Food Items in Retail Outlets

In variables like convenient location of the shop, convenient for purchase and working women convenience, there was no significant difference between modern and traditional retail outlets.

In case of packing, schemes and offers attractive advertisement, store image and labeling, there significant difference between modern and traditional retail outlet because in modern retail outlets packing schemes and offers, attractive advertisement, store image and labeling were more attractive as compared to traditional retail outlets.

Service to customers, behaviour of the employees, availability of quality products were more attractive in modern retail outlets as compared to traditional retail outlets. Hence there was a significance difference between modern and traditional outlets. Parking facilities and home delivery of the products was adequately available in modern outlets as compared to traditional outlets. In modern retail outlets wide range of the products were available as compared to traditional retail outlets.' Prices were less reasonable both in modern and traditional retail outlets as indicated by insignificant 't' value calculated between the means of the opinion scores.

In modern retail outlets, shopping was significantly enjoyable as compared to traditional retail outlets. Payment method did not significantly differ in between modern and traditional retail outlets. Shopping in modern retail outlets save more time as compared to traditional outlets. The cleaned and packed products in required quantities would save the time of the consumers as majority of the shop visitors to modern retail outlets were office goers and they would absolutely have no time to examine the quality and quantity of the product.

Due to urbanization, changing lifestyles, strong income growth and favourable demographic patterns the food consumption habit of Indian consumers has been changing over the years. Most of the consumers shifting from traditional format to modern format because of the better shopping experience.

6. SUMMARY AND POLICY IMPLICATIONS

INTRODUCTION

The world over retail sector has been growing rapidly with increasing sophistication and modernization of the life-style of households and individuals and also with increasing globalization of trade. The retail sector has strong backward and forward linkages with other sectors like agriculture and industry through stimulating demand for goods and through mass marketing, packaging, storage and transport. Moreover, it creates considerable direct and indirect employment in the economy. Also, the consumers have benefited in terms of wide range of products available in a market.

Retailing is one of the largest industries in India and second largest employer after agriculture. The retailing industry provides employment to over 18 million people. One out of every 25 families in India is engaged in the business of retailing with the ownership and management predominantly controlled by the family. However, in sharp contrast to developed countries, unit average size of retail outlet in India is very small. Here, the majority of food consumption is still at home. Nevertheless, out-of-home food consumption is increasing. Traditional local markets and small-scale retailing continue to dominate India's food retail sector.

Unlike most other countries, Indian retail sector is highly fragmented and bulk of the business is in the unorganized sector (97 per cent) like local 'wet' market vendors, roadside pushcart sellers or tiny kirana (grocery) stores. However, the share of organized retail sector is likely to grow from its current three percent to 15-20 per cent over the next decade.

Food retailing is one of the important parts of the present organized retail industry in the world. Growing at a rate of 30 per cent the Indian food retail is going to be a major driving force for the retail industry. The changing life styles, tastes and higher disposable income, growing need for convenience, etc. has revolutionized the food retail scenario of the country and now it has become the largest segment of the retail sector of India.

The study conducted by the Rabo India Finance Pvt. Ltd. says that south Indian states of Tamil Nadu, Andhra Pradesh and Karnataka have taken a lead role in establishing modern food outlets. The growth of organized retailing has shown particular vigour in Chennai and Bangalore where an estimated 40 per cent of their grocery requirements were met through modern retail outlets.

Karnataka is one of the leading states in organized retailing in India as there are more than ten organized retailers (firms) with more than 100 outlets including Metro AG operating in Bangalore city alone due to increasing urbanization and expanding service sectors like software, banking, insurance and business process outsourcing (BPO), which has taken a metropolitan city status more recently has led to increase in income of the consumers. Apart from Bangalore, cities such as Mysore, Mangalore, Hubli-Dharwad and Belgaum in Karnataka are also growing rapidly in terms of urbanization, income and organized retailing with local food marketers as they are converting unorganized retail outlets into organized form because of strong demand for convenience products and better educated consumers concerned about health, nutrition, food safety, and the environment.

The state is experiencing rapid structural change with the emergence of huge retail firms with massive buying power and concomitantly concentration in the manufacturing sector. Hence, an effort was made in the state to study the business aspects of organized food retailing in general and supermarkets in particular. In addition, consumers study was also undertaken to know the factors to be considered while purchasing their food products in food retail outlets. The specific objectives of the study were as follows:

1. To study the procurement and inventory management in modern and traditional retail outlet.
2. To analyze the investment pattern in modern and traditional retail outlets.
3. To study the costs in value addition made by retail outlets.
4. To study the cost and returns in the trade by retail outlets.

5. To identify the factors influencing the efficiency of retail outlets and consumer behavior in purchase made in retail outlets.

METHODOLOGY

The present study is mainly concerned with the retailing activities of the modern and traditional retail outlets in Bangalore city

To fulfill the objectives related to the retail outlets operations of the study a simple random sampling technique was used. Bangalore was selected as the study area as this city was the hub of retail revolution and has different retail chains operating from a long period of time. Also many new retail chains have opened their outlets recently in the city and many retail chains have made Bangalore as their focal point of their managerial operations.

The retail shops involved in retailing selected products in different formats will be selected. The retail shops under modern format such as Subiksha, Food world, Fabmall, Spencer, Safal will be selected and traditional format Retail shops will be selected at the rate of 5 constituting totally 10 retail outlets. Similarly the consumers visiting these outlets will be selected at the rate of 30 randomly from each of the two types of retail outlets, thus making a total sample size of 60 consumers.

Since it is difficult to study the overall operations in all the products, only two products from each agricultural commodity groups like rice and wheat in cereals, tur dal and greengram in pulses, groundnut in oil seeds, groundnut oil and sunflower oil, raisins and cashewnut in dry fruits were selected.

Data collection

The detailed information required for the study was collected from both primary and secondary sources in order to accomplish the various objectives of the study.

The primary data on procurement aspects like from whom they procure, quantity procured, costs of procurement were collected to understand the procurement management. The information on stages involved in processing, cost incurred in processing and the value addition per unit of each selected products in different categories such as food grains, pulses, Oil seeds, dry fruits.

Apart from these, to study the factors influencing the efficiency of the retail outlets, the information regarding the socio-economic factors like age, education, occupation, income, family size, family type, religion etc., product factors like price, quality, packaging, labeling and other factors like range of products, convenience, location, credit, home delivery, parking facility, service quality and schemes and offers etc., were collected from the randomly selected consumers from each type of outlets using the pre-tested schedule through the personal interview method.

The secondary information were obtained from selected retailers record with respect to investment pattern, quantity and value of inventories maintained and cost and returns obtained in the business.

Analytical Techniques Employed

The tabular analysis was used with the help of averages and percentages to calculate investment pattern, costs of procurement, inventory costs and value addition aspects, and cost and return structure in retail outlets were summarized to obtain meaningful inferences. T-test was used in identifying the factors influencing the consumers to purchase food products at retail outlets.

Findings of the Study

1. The weekly average quantity the of products procurement in modern and traditional retail outlets in Bangalore city revealed that the average frequency of purchase in groceries was once in a week, but it was once in a fortnight in raisins and cashewnut. It was also revealed that APMC was the only source of purchase for grocery products as it is the only governing body for marketing of agricultural commodities.
2. On the average, The quantity purchased in modern retail outlet was more as compared to traditional retail outlets. Quantity purchase in modern outlet was maximum in rice

(21.8quintals) followed by tur dal (1.75 quintals), greengram (1.08 quintals), groundnut (0.95 quintals) and wheat (0.59 quintals), The total amount spent found to be much in rice (Rs. 34226) due to its high quantity of purchase. The main source of purchase for groceries was APMC only.

3. In oils quantity purchased was maximum in sunflower oil (2.05 quintals), followed by groundnut oil (1.34 quintals). The total amount spent found to be maximum in sunflower oil (Rs.14452.5) due its high quantity of purchase. Whereas incase of raisins and cashewnut, quantity procured was very less(0.058 quintals each) because less demand from the consumers. The amount spent was highest in cashewnut because of its high unit cost. Oils, raisins and cashewnut were purchased from distributors.
4. In all the commodities except wheat, quantity procured found high in modern retail outlet. It may be due to higher average size of the retail outlets and high turnover of the commodities.
5. Between modern and traditional retail outlets there is no significance difference in procurement cost since agency for procurement was same in both modern and traditional retail outlets.
6. The weekly inventory management revealed the short time period inventories maintained in different commodities by the retail outlets in Bangalore city. The inventory period was ranged between four and six days in all the food items, whereas in case of raisins and cashewnut, it was 13 days in modern retail outlet. In traditional retail outlet, storage period was 5.5 days in rice, wheat, greengram, tur dal and groundnut, 6 days in oil and 12 days in the case of raisins and cashewnut.
7. In modern retail outlet, the average quantity of inventories maintained were high in rice (21.8 quintals) followed by tur dal (1.75quintals), greengram (1.08 quintals), groundnut (0.95 quintals) and wheat (0.59 quintals) in groceries, sunflower oil (2.05 quintals) followed by groundnut oil (1.34 quintals) in oils. In raisins and cashewnut it was (0.058 quintals) each.
8. In traditional retail outlets the average quantity of inventories maintained were high in rice (16.8 quintals) followed by tur dal (1.3quintals), groundnut (0.9 quintals), greengram (0.7 quintals), and wheat (0.63 quintals) among groceries, sunflower oil (1.55 quintals) followed by groundnut oil (0.95 quintals) in oils and in raisins and cashewnut it was (0.032 quintals).
9. Among inventories, the finished product inventory was found to be maximum both in terms of quantity and storage period as the product should be ready for sale shelves to maintain regular and accurate stocks for the consumers. Next to finished product inventory, most of the product was detained at work in sales inventory.
10. Among inventory costs, the packaging material cost and labour charges for cleaning and packing were found to be the major cost components of inventory management in all the commodities in both the type of outlets.
11. Packaging material cost was found to be maximum in modern retail outlets as compared to traditional retail outlets because of the use of costly material in packaging, which were durable, attractive and with printed information (which includes their trade mark brand name and ingredients) on it to attract the customers.
12. Labour charge for cleaning and packing was found to be maximum in traditional retail outlet as compared to modern retail outlets due to employment of manual labour for cleaning, whereas in case of modern retail outlets cleaning was done by using machines,
13. There is no significance difference in inventory cost between modern and traditional retail outlets because there is no much difference in cost components like labour charge, packing material cost and shrinkage value in both the retail outlets.
14. The average area of the retail outlets in Bangalore city was found to be 4200 square feet and 3500 square feet in modern outlet and traditional outlet respectively. Usually size is an advantage because a large store designed and built, has the capacity to deal with the expected number of customers in the neighborhood.

15. The analysis of investment pattern in retail outlets indicated that on an average, the total cost of investment accounted to Rs 982.9 per square feet and Rs 756.33 per square feet in modern and traditional outlets respectively. The average fixed capital of these outlets were Rs.941.77 (95.81%) per square feet and Rs.718.58 (95%) per square feet respectively, while the respective working capital accounted to Rs 41.12 (4.18%) per square feet and Rs.37.75 (5%) per square feet respectively. The higher costs in modern retail outlet was due to higher labour costs, social security to employees high quality real estate, much bigger premises, comfort facilities such as air-conditioning, back-up power supply, taxes etc.

16. It was also noted that in both modern and traditional outlets, majority of the fixed capital investment up to 81.4 per cent and 93.83 per cent respectively was invested on land. In case of working capital, raw materials were the prime costs contributed about 47.5 per cent and 54.5 per cent of the total capital in modern and traditional outlet respectively as the retailing business itself is to reselling of commodities and quicker conversion of inventory into cash.

17. The Results revealed that in the entire groceries cent per cent of cleaning and bagging were undertaken by all the modern and traditional outlet to maintain good relationship with the consumers by providing good quality products. In addition, it is very much necessary and the only way to compete with the conventional stores. However, grading was observed in 60 per cent of modern retail format and in traditional retail outlet grading was observed in 20 per cent.

18. It was observed that in modern outlet, the value added was highest in case of raisins (33.46%), followed by greengram (28.69 %), cashewnut (23.3 %), rice (22.16%), wheat (17.62%), groundnut (15.89%) and tur dal (13.66%) due to higher prices obtained and relatively lower percent of wastages. No value was added either by processing (or) packing in case of groundnut oil and sunflower oil in either modern or traditional outlet.

19. In traditional outlets it was observed that, the value added was highest in case of wheat (19.9%) followed by raisins (19.10%), greengram (18.90%), rice (15.38%), cashewnut (12.76%) groundnut (9.12%) and tur dal (8.92%). It was observed that packing, schemes and offers, attractive advertisement, store image, labeling, service to customers, parking facility, home delivery, range of the products available, shopping seen as enjoyable were the factors influencing the consumer behavior to purchase in retail outlets.

20. Total average quantity of food items handled by modern retail outlet was higher than the traditional retail outlet. The average total purchase value in modern retail outlet was Rs 8478.25, whereas in traditional outlet it was Rs.6570.2. Average total sale value in modern outlet was high Rs 10453.94 compared to traditional retail outlet Rs.7643.6. The average gross returns over purchase value retained by modern retail outlets and traditional retail outlets were Rs 1985.76 and Rs.989.91. Average total marketing cost incurred in modern outlet was high (Rs.429.3) as compared to traditional outlet (Rs.352.95).

Policy Implications

1. It was noticed from the study that all the retailers /supermarkets purchased grocery items from the Agricultural Produce Market Committee (APMC) only. Hence, there is no threat to traditional retail outlets from modern retail outlets.

2. Value addition due to processing was high in modern outlets as compared to traditional outlets which results in high profits and the modern retail outlets are performing better than the traditional retail outlets. Hence, there is a lot of scope for the traditional retail business to shift from unorganized to organized form of retailing to cater to the changing need of the modern customer.

3. The highest packaging cost which was the major cost component in cost of packaging is attributed to the use of costly material in packaging, which is durable, attractive and printed information (which includes their trade mark brand name and ingredients) on it to attract the customers. Hence retailers may go in for out sourcing of supplies in order to get quality packaging materials at reasonable price.

4. It was observed from the study that the modern were performing better than the traditional and most of the existing supermarkets in the state are traditional, hence, there is a lot of scope for the supermarket business to shift from traditional to modern form of retailing to cater the changing needs of the modern customers.

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A Study of working of Organized and Unorganized retail outlet

APPENDIX I. QUESTIONNAIRE FOR RETAIL OUTLETS

1. Name of the Retail outlet :
2. Location :
3. Head-Office :
4. No. of Units :

I. INVESTMENT PATTERN

A. Fixed Costs

Items	Year of Purchase/Established	Value (Rs)	Economic life Period (Years)	Annual Depreciation
1. Land				
2. Building i) Storage/ Godown ii) Office iii) Rent on building iv) Any others				
3. Machinery & Equipments i) Display cases ii) Floral cases iii) Display walk-in-freezers iv) Hot-food display cases v) Ice machines vi) Site map vii) Any others				
4. Infrastructural facilities a) Power generator b) Transport vehicles c) Trolleys d) Any others				
5. Other fixtures a) Fan b) Computers c) Tube lights d) Furniture e) Any others				

6. Salary to permanent employees (Rs) :

7. Borrowed capital (Rs) :

8. Interest on Borrowed capital (Rs) :

9. License fee (Rs) :

10. Corporation Taxes (Rs) :

11. Insurance Premium :

12. Any others :

B. Variable Costs

Items	Quantity/No.s	Rate (Rs/Unit)	Amount (Rs)
1. Power charges			
2. Repair & Maintenance			
3. Wages to casual labour			
4. Raw material cost			
5. Fuel charges			
6. Borrowed working capital			
7. Interest on working capital			
8. Commission charges			
9. Telephone charges			
10. Sales tax / VAT			
11. Office maintenance			
12. Salary / Wages			
13. Marketing costs			
i) Gunny bags			
ii) Other packaging materials			
iii) Transport			
iv) Handling			
v) Market fee			
vi) Advertisement			
vii) Others, if any			

I. PROCUREMENT MANAGEMENT

A. Procurement of Different products in Retail Outlets during 2006-07

Products	Agency	Quantity procured (Qtls)	Price (Rs/Qtl)	Cost of procurement						Total Cost
				Market fee	Cleaning & Weighing	Transport & Handling	Loading/ Unloading	Packaging material	Commission (Rs/Qtl)	
1. Rice	Farmer CA/Market Co-op Society Village merchants Itinery trader Mftg. distributors Any others									
2.Green gram	Farmer Comm. agents Co-op Society Village merchants Itinery trader Mftg. distributors Any others									

3 Wheat	Farmer Comm. agents Co-op Society Village merchants Itinery trader Mftg. distributors Any others									
4.Groundnut	Farmer Comm. agents Co-op Society Village merchants Mftg. distributors Itinery trader Any others									
5.Groundnut oil	Farmer Comm. agents Co-op Society Village merchants Itinery trader Mftg. distributors Any others									
6.Sunflower oil	Farmer Comm. agents Co-op Society Village merchants									

	Mftg. distributors Itinery trader Any others									
7.Dry fruits	Farmer Comm. agents Co-op Society Village merchants Itinery trader Mftg. distributors Any others									

B. Storage of different products during 2006-07 (Monthly-wise)

Products	Monthly	Purchased	Sold	Wastage	Stored
1. Rice	Jan Feb March April May June July Aug September October Nov Dec				
2. Green gram	Jan Feb March April May June July Aug September October Nov Dec				
3.Wheat	Jan Feb March April May June July Aug September October Nov				

	Dec				
4. Groundnut	Jan Feb March April May June July Aug September October Nov Dec				
5. Groundnut oil	Jan Feb March April May June July Aug September October Nov Dec				
6..Sunflower Oill	Jan Feb March April May June July Aug September October Nov Dec				

5. Dry fruits	Jan Feb March April May June July Aug September October Nov Dec				

C. Storage cost (Rs/Qtl) during 2005-06.

i) Labour
ii) Insurance
iii) Fumigation of any other protection measures
iv) No. of months stored
v) Warehouse charges (If stored in warehouse)
vi) Storage losses
vii) Other, if any

II. INVENTORY MANAGEMENT

A. Quantity value and cost of different inventories maintained at different stages by super marketers during 2005-06 (Cost in Rs/ qtl)

Product	Inventories	Quantity (Qtl)	Value (Rs)	No. of days stored	Cost components			
					Interest @ 18%	Storage & store maintenance	Material loss @ 1%	Total (Rs)
1. Rice	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							
2. Green gram	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							

3. Wheat	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							
4. Groundnut	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							
5. Groundnut oil	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							

6.sunflower oil	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							
7. Dry fruits	Raw material Inventories Work-in-process inventories Finished product inventories Work-in-sales inventories Other inventories Total inventories							

B. The value addition per unit of selected products during 2006-07

Products	Particulars	Units	Amount
1. Rice	i) Sales value of products obtained ii) Purchase value of the product		
2. Green gram	i) Sales value of products obtained ii) Purchase value of the product		
3. Wheat	i) Sales value of products obtained ii) Purchase value of the product		
4. Ground nut	i) Sales value of products obtained ii) Purchase value of the product		
5. Ground nut oil	i) Sales value of products obtained ii) Purchase value of the product		
6. Sunflower oil	i) Sales value of products obtained ii) Purchase value of the product		
5. Dry fruits	i) Sales value of products obtained ii) Purchase value of the product		

Factors influencing the efficiency of retail outlets

Sl. No.	Particulars	Yes/No	Qty	Price	Total value
I.	Time of delivery of produce and place of delivery of produce				
II.	Physical functions				
a.	Assembling activities / cleaning, grading activities				
b.	Packing activities				
c.	Storage activities				
III.	Credit facilities				
IV.	Retailing activities				
V.	Other specify i. ii. iii.				

QUESTIONNAIRE FOR CONSUMERS

I. Socio-Economic characteristics

1. Name of the respondent:
2. Age:
3. Location/Area:
4. City:
5. Education: HS/PUC/Graduation /PG
6. Occupation:
7. Monthly Income (Rs):
8. Type of family: J/N
9. Food habit: Non-veg /Veg
10. Family size:
11. Name of the supermarket (preferred for shopping):

II. Factors influencing the consumers to purchase in Retail outlet :

(Tick the appropriate option):

Sl. No.	Factors	Most	Medium	Less
1.	Convenient location of the supermarket			
2.	Range of products available			
3.	Convenient for purchase			
4.	Availability of quality products			
5.	Reasonable prices			
6.	Parking facility			
7.	Payment methods (Cash, Cheques or Credit cards)			
8.	Shopping is seen as enjoyable			
9.	Attractive packing			
10	Schemes & Offers			
11.	Better service to customers			
12.	Home delivery			
13.	Save time of shopping			
14.	Working women and convenience			
15.	Attractive Advertising			
16.	Store image			
17.	Behaviour of the employees			
18.	Freshness of the products			
19.	Labeling (Composition of ingredients)			
20.	Product warranty			
21.	Good quality products			
22.	Frequency of visits			
23.	Amount spare			
24	If any others			

APPENDIX II. QUESTIONNAIRE FOR CONSUMERS

I. Socio-Economic characteristics

1. Name of the respondents :
2. Age :
3. Location/Area :
4. City :
5. Education : HS/PUC/Graduation/P
6. Occupation :
7. Monthly income (Rs.) :
8. Type of family: J/N
9. Food habit : Veg/Non-veg
10. Family size :
11. Name of the supermarket (preferred for shopping)

II. Factors influencing the consumers to purchase in Retail outlet :
(Tick the appropriate option)

1.	Convenient location of the supermarket		Most convenient		Convenient		Less convenient
2.	Range of products available		Wide range		Average		Very narrow
3.	Convenient for purchase		Most convenient		Convenient		Less convenient
4.	Availability of quality products		Very good		Good		Moderate
5.	Reasonable prices		Highly reasonable		Moderately reasonable		Less reasonable
6.	Parking facility		Adequately available		Available		Less available
7.	Payment methods (cash, cheques or credit cards)		Cash		Cheque		Credit card
8.	Shopping is seen as enjoyable		Highly enjoyable		Enjoyable		Less enjoyable
9.	Packing		Highly attractive		Attractive		Less attractive
10.	Schemes and Offers		Highly attractive		Attractive		Less attractive
11.	Service to customers		Very good		Good		Moderately good

12.	Save time of shopping		More		Medium		Less
13.	Working women and convenience		Most convenient		Convenient		Less convenient

14.	Attractive advertising		Highly attractive		Attractive		Less attractive
15.	Store image		Highly attractive		Attractive		Less attractive
16.	Behaviour of the employees		Very good		Good		Moderately good
17.	Labeling (composition of ingredients		Highly attractive		Attractive		Less attractive
18.	Frequency of visits		Regularly		Weekly		Rarely
19.	Home delivery		Available		Less available		Not available
20.	If any others						

A STUDY ON WORKING OF MODERN AND TRADI TIONAL RETAIL OUTLETS: A COMPARATIVE ANALYSIS

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ABSTRACT

Globally, retailing is a big business. It is one of the largest industries in India and second largest employer after agriculture. The share of organized retail is more in developed countries but bulk of this business is unorganized (97%) in India. In recent times, retail sector has been growing rapidly with the multitude of factors viz., increasing sophistication, modernization of the life-style of households and increasing globalization of trade. Hence, an effort was made in the state to study the entire business aspects of organized food retailing particularly in supermarkets using both primary and secondary data collected from various sources.

In both modern and traditional outlets rice, wheat, greengram, tur dal and groundnut was purchased from traders in APMC. Groundnut oil, sunflower oil, raisins and cashewnut was procured from distributors. Frequency of purchase was once in week in rice, wheat, greengram, tur dal, groundnut groundnut oil and sunflower oil but it was 0.5 in case of raisins and cashewnut. Rice was procured in highest quantity 28.1qtls and 16.8 qtls both in modern traditional retail outlets. Since, for both type of retail outlets, the source of supply and mode of supply being the same, their could not be any significant difference in the value of procurement. Short time period inventories were observed in both modern and traditional retail outlets.

The cost of preparation product in modern retail outlets was more as compared to traditional retail outlets. In the case of modern retail outlets the net value added was much higher than the traditional retail outlets in all the grocery items.

Modern retail outlets gained higher profit compared to traditional retail outlets. Since, retailers undertook retailing business of several commodities and there was a quick turnover of business in modern retail out and hence economics in costs were achieved by them.