Chapter II

A REVIEW OF EMPIRICAL AND THEORETICAL LITERATURE

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2.1 Introduction

In the present scenario, quality preference is not at all exclusive to durable goods. In advanced economies, quality preference in terms of brand is a pervasive phenomenon in food products too. The same trend of using more and more processed and branded food products, though at a gradual pace, steps into the Indian food habits especially among urban dwellers (Vepa, 2004). The fast pace of our present living induces many to shift towards convenient, processed, ready-to-eat food items which are generally available in global and national brand name. These shifts in food consumption pattern have their dent on the family budget as well as on the overall health profile across different segments of population.

The body of literature on the influence of brands/quality preference on Indian urban food consumption pattern is relatively meagre, but has an array of regional and national studies on food consumption pattern and food consumption inequality based on National Sample Survey (NSS), National Accounts Statistics (NAS), National Council for Applied Economic Research (NCAER) and other data sets. However, there are certain international studies on brand preference in food are available. There are some approaches and models available to analyse the extent, dimensions, determinants and impacts of such a shift in food consumption pattern. This chapter is a revisit on these literatures to identify the literature gap and also to locate the appropriate theoretical background for the study. The plan of exposition of the present chapter is that;
• **Section 2.2** gives a brief survey of literature on consumption inequality, shift in food consumption pattern, its economic and health implications, and finally identifies the research gap. Studies were first arranged issue wise then by international, national, regional sequence as well as in chronological order.

• **Section 2.3** gives a brief account of some of the important theories; approaches and models linked with the present study; and finally.

• **Section 2.4** presents a brief profile of the study area.

### 2.2 A Survey of Literature on Consumption Inequality

The relationship between the distribution of income and its impact on economic development is one of the oldest and important matters of concern for economists and continues to be so. There are studies that deal with income inequality based on the income tax data. However, in a country like India where reliable data on income is scanty, the present review covers only the studies on consumer expenditure inequality, which are more reliable than the former. In addition to that, consumption expenditure is taken as a close proxy for income in India. Over the years, it has been a matter of concern for India that there exists a wide inequality among the rich and poor in the consumption expenditure and there is any positive signal of convergence in it. In a report of NCAER Shukla and Kakar (2007), found that in India if the poor spend Re.1 on food the rich spend Rs.4. In the case of luxury items and durables, if the poor spend Re.1 the rich spend Rs.188. There are many studies to deal with consumption inequality in India; a brief account of them is given in a national, regional sequence and in chronological order.

In the year 1967 and in 1972 the NCAER conducted an all India consumer expenditure survey to showcase the similarities and differences in the pattern of consumer expenditure and income in developed and underdeveloped areas of India (NCAER, 1967 and 1972). The survey results exhibit that the concentration of income and expenditure in the higher income bracket is greater in the developed areas than in under developed areas. In addition to that, the survey found out a clear shift of expenditure from food to non-food and within food from cereals to other food items.
The study observed a high degree of concentration of income in rural as well as urban areas towards the rich income group.

Chatterjee (1976) made a comparative study of the average per capita consumer expenditure among the rural and urban areas in 1976. This study classifies the different expenditure classes of the 18th round NSS data into five quintile groups (20 per cent each) and found that the per capita expenditure of each quintile group had increased both for the rural and urban areas in each State. The study observed that the average per capita expenditure in the urban sector was always found to be greater than their rural counterpart.

Using NSS 55th round unit level data, Coondoo et al. (2004) investigated the consumption inequality among different States and across different income groups. They used an alternative and composite method using official poverty line, calorie intake norm, food expenditure and total expenditure norm to estimate consumption inequality. A nutrient cost estimate has been introduced by them as a novel concept to measure poverty and inequality to solve heterogeneity in price and basket of goods consumed by different segments of people across different regions of the nation. The cost or price required to attain the minimum calorie requirement will reflect poverty and consumption inequality among different groups and regions. They observed that consumption inequality exist among different income strata and among various States.

Virmani (2006) using the NSS, World Bank, and data sets from various studies examined the ways and means to eliminate poverty and hunger in India. To him our income distribution as measured by the Gini-coefficient is better when compared to some other countries of the World. The consumption share of the poorest 10 percent of the population is the 6th best in the world. This article contests the argument that poverty has not declined since 1990s. On the contrary, this study evidences that the consumption distribution has unambiguously improved during the nineties and inequality has diminished. The study observes that there is a linear relationship between aggregate poverty and average consumption. A one rupee increase in average real monthly consumption expenditure raises one per cent of the total population above the poverty line.
Chand (2007) attempted on the intra-state and inter-state consumption expenditure inequality, rural-urban disparity in consumption expenditure and relationship between consumption expenditure and inequality, using the NSS data from the seven quinquennial rounds, for the period 1973-2005. He used MPCE as a measure to analyze inequality. The study remarked that the inequality by Gini ratio for rural India declined marginally during the period 1973-2005. In the urban areas, however, the inequality did not decline in any State during 1973-2005. The MPCE increased in real terms in India and across all States during the period 1973-2005. Kerala has registered the highest growth in MPCE both in rural and urban areas. The study observed that the percentage of expenditure on food to total consumption expenditure declined in rural and urban areas of all the States during period 1973-2005.

Using income and expenditure data of NCAER (National Survey of Household Income and Expenditure) and expenditure data of NSS 61st round survey data Shukla (2010) analysed the extent of poverty and consumption inequality in India. The study demonstrates the fact that since urban income is 85 per cent higher than rural income in India, so is urban MPCE. The study revealed that the lowest income quintile which comprises 18 per cent of the households enjoys only 6.3 per cent of the total income whereas the highest income quintile which comprises 22.1 per cent of the households enjoys 48 per cent of the total income. It was also found that wide inequality exists between rural and urban areas in income and expenditure. The study found that the poor spend 60 per cent of their total income on food, whereas it is only 49 per cent among the rich. Inequality in income is much higher among the non-poor than the poor households.
A Review of Regional Studies

Subramanian and Prasad (2008) examined the inequality in income and consumption in the context of Kerala using the NSS data for the period from 1993-4 to 2004-05. They concluded that the level of inequality in Kerala has been rising along with the economic growth of the economy under the neoliberal regime. The study found that the share of the poorest 10 per cent of the population in the total consumption for the period 1993-94 was 2.81. It declined marginally to 2.41 in 2004-05 in rural Kerala whereas the share of the richest 10 per cent increased significantly from 29.90 to 34.31 in the same period. The corresponding figures for urban Kerala were 3.11, 2.15 and 24.05, 31.37 respectively. They also the estimated Gini-coefficient value for Kerala (0.4) which is internationally considered as representing excessive inequality. The study also revealed that consumption inequality is much higher in Kerala when compared to other States.

2.2.1 A Survey of Literature on Shift in Consumption Pattern in India

A shift of expenditure from food to non-food is considered as an index of relative economic well being. In the present sub-section, a brief review of some of the important national and regional studies on shift in consumption pattern towards non-food is given in national and regional sequences and by chronological order.

Gupta (1986) in an econometric study, using CSO data, analyzed the aggregate consumption behaviour and trends in the consumer expenditure in India. The study has used six forms of Engel functions for the estimation of expenditure elasticity of broad groups of commodities. The study revealed that the MPCE for food was higher in the early period, showing a declining trend whereas the MPCE for non-food items has registered an increase, thereby indicating a structural shift in consumption pattern since mid 60’s. The estimated expenditure elasticities are found to be relatively low for food items, while the same are very high for non-food items.
Bhatty (1989) using NCAER, NSS and NAS data, considered the trend of household consumption pattern in India on the side line of poverty and emerging trend of consumerism in India. To him, up to 1960’s especially in 1961-62, the proportion of total expenditure devoted to food shows an upward trend. The Engel type of budgetary allocation started in India only in 1975. It is a turning point as far as India is concerned, as it shows the beginning point of a long term decline in the poverty rate in India. The study observed that there is clear evidence for the shift in expenditure from food to non-food during this period. In 1986, there was a shift in the preference of consumers as they moved upward in the hierarchy of consumer needs from essential to non essential or from more essential to less essentials as income escalates.

Meenakshi (1996) examined the State level changes and variations in the taste and preference of the people in regard to food items with the help of linear expenditure system for the period 1972-73 to 1987-88. The data set used was NSS data for various rounds. The study demonstrates that consumers, in general, especially urban people, are switching over their expenditure from cereals to more expensive foods like milk, poultry, vegetables, and meat products. Consumption of cereals in quantity terms declined both in rural and urban areas and across the rich and poor in many States while that of non-cereals has increased during the study period.

Rao (2000) examined the consumption pattern of cereals both in rural and urban sectors of the economy over a period 1972-73 to 1993-94 using NSS data. The study found that consumption cereals are increasing among the bottom 30 per cent group, where as it is declining among the middle 40 percent and 30 percent group. However, expenditure pattern is shifting from cereals to non-cereals and from food to non-food items.

Sethi (2001) examined the nature and speed of structural transformation in India’s private final consumption expenditure along its growth path. The data set is time series data for 49 years (1950-51 to 1998-99) from NAS. This study pointed out that there are enough evidences for structural changes in consumption pattern in India during the period. The consumption expenditure has undergone perceptible structural changes during the study period. The speed of change was much faster during the period.
1970-1998. The study reported that Indians have shown a tendency to consume relatively more of the items that have quality, a rather luxurious style of living. Globalization and resultant change in health and education sector have been cited as the prime cause of increase in private consumption expenditure. This study has made an observation that relative share of expenditure on food items has declined while that of non-food items has risen over the period.

Gangopadhyay and Wadhwa (2004) conducted a study on household consumption pattern and the extent of poverty in India for the period 1983-2000 comparing NSS and NAS data. The study summarized that the proportion of income devoted to food decreased from 63 per cent in 1987-88 to 54 per cent in 1999-00 in urban India while in rural areas it drops from 69 to 62 per cent. The expenditure on miscellaneous rose from 18 to 25 per cent in the urban sector, while in the rural sector, it went up from 14 per cent to 19 per cent. The study has made an observation that as income increases there is a shift of expenditure from food to non-food and from essential to non essentials across both rural and urban population of India.

Prasad (2005) conducted a study about elasticity of demand for food in India for the period 1950-51 to 1999-2000 using NSS and CSO data and with various Engel forms. On the basis of elasticity of demand he classifies food items as normal good, in to luxuries for which elasticity of demand is greater than one. The study reports that the rate of growth of per capita food consumption expenditure is less than proportional to the rate of growth of total consumption expenditure during the period. The expenditure on cereals, bread, sugar and gur and oil and oilseeds increased at a compound rate while the expenditure on pulses declined. The expenditure on fruits, vegetables, milk, milk products, meat fish, coffee, tea, spices and other food have registered higher rates as compared to the growth rate of other food commodity group during the study period. Expenditure elasticity for foods like fruits, vegetables milk, milk products, meat fish, coffee, tea and spices are found to be greater than one and are therefore classified as luxuries. Cereals, bread, sugar, gur, oil and oilseeds and pulses were classified under the category of necessities since the elasticity of demand for such items was less than one.
A Review of Regional Studies

In a study on the consumption expenditure pattern in Kerala, Sunny (1988) used three forms of Engel functions for the analysis of the NSS data for the period from 1965-66 to 1982-83. The study observed that there is a significant difference in the consumption pattern of Kerala when compared to the other parts of India. In Kerala, there is no significant correlation between the two variables per capita income and per capita expenditure unlike other States of India. The study has made an observation that in Kerala, the proportion of expenditure on food item has declined while that on non-food item has increased during the study period.

In a study about the correlation between economic growth and the change in consumption pattern of Kerala, using NSS data for the period 1972-73 to 1999-00, Baiju (2002) found that there is a structural shift in the composition of food basket of Kerala. The study makes an observation that there is a shift of expenditure from cereals to non-cereals and from food to non-food both in urban and rural Kerala during the period. The shift was more pronounced among the middle and upper middle income groups when compared to the lower income group. However, the per capita real consumption of food and non-food items was found higher in urban Kerala when compared to the rural. The expenditure elasticity for food both in urban and rural sectors declined, whereas it has increased for the non-food items during the period.

Pavithra et al. (2010) made an attempt to analyse the food consumption pattern in Karnataka in the year 2007-08. The household consumer expenditure data for the 50th and 61st round of NSSO were used as the main source of secondary data for the study. This study observed a shift of expenditure from cereals to non-cereals and also from food to non-food items in Karnataka during the period. The monthly per capita consumption of cereals in quantity terms has declined while that of wheat has increased over the period. The expenditure elasticity for all food groups were less than unity in urban areas of the State with the highest value being for vegetables. The lowest expenditure elasticity was observed for cereals. This study observed that consumers in the urban areas have a tendency to diversify their diet to beverages, fruits, nuts, meat and egg as income increases.
2.2.2 A Survey of Literature on Shift within Food, its Determinants and Impacts

Urban food consumption pattern is entirely different from their rural counterpart. Urban centers are the centers of income generating economic activities and people are very busy with their work when compared to the rural. They do not have much time in food selection and preparation and are more concerned about quality and safety of food. These concerns often translate into the selection of processed and branded food products since there is a perception that these products ensure quality, convenience and safety. Desire for food variety also plays its own role in shifting the consumption pattern of urbanities. There are many other attributes also to influence food selection. Such food consumption habits have their dent on the family budget, calorie intake, cost of calorie, and consumption inequality and overall health profile of the people. It is to be borne in mind that there are only limited number of regional and national studies addressing these issues but a lot of international studies are available. The data sets used for these studies are NSS, NNMB, National Family Health Survey (NFHS) Food and Agriculture Organization Statistics (FAOSTAT), Food Balance Sheet (FBS), and other data sets. A brief survey of these studies is presented in the present sub-section in a sequence of international, national and regional and also by chronological order.

2.2.2.1 A Review of Studies on Shift within Foods and its Determinants

Pitt (1983) investigated the dietary choices and calorie intake of the rural Bangladesh using a family budget data of 5750 households. This study also examines how food preference varies according to food expenditure. This study argues that poor households devote more attention to acquire their calorie requirement rather than seeking other attributes of food like taste, smell and convenience. Poor households choose food which is an inexpensive source of nutrients. At higher levels of expenditure, households prefer taste by neglecting the nutrient cost aspects of such foods. The study observed that the difference in nutrient cost between lower expenditure and higher expenditure group is because of differences in diet quality and preferences. If superior variety of food is made available to the poor in subsidized rate, study pointed out that, there is a preference for superior quality food among the poor people also. Therefore it is clear that quality
preference does exist among the poor also. However, it is remarked that poor are more price sensitive than rich in respect of many food items.

In a pioneering cross section study about the demand for food variety among the U.S households using a published data for 304 expenditure categories from the consumer expenditure survey conducted in 1972-73 in the U.S.A, Jackson (1984) finds a significant and positive relationship between food variety and income.

Delisle (1990) conducted a study on urban food consumption pattern of developing countries using FBS of FAO and Household Consumption/Budget Surveys (HCS). The study reports that there are enough evidences for factors other than price, like convenience, influencing food selection even among low income urban dwellers. The study has made an explicit remark that for the middle class consumers, price is only one of the factors motivating food choice, other factors being convenience, taste, quality, prestige, cultural value, appeal, and so forth. The study reports that desire for processed food and soft drinks in the name of convenience and fashion may affect the intake of nutrient among urban dwellers since these foods are termed as foods having inferior quality of calorie. The study has made an observation that as income increases; diet diversity increases. The study has also held the view that women’s level of education is believed to have a correlation with food consumption pattern.

Baker and Crosbie (1993) analysed the individual consumer preference for food safety attributes among 160 consumers of fresh apples by using conjoint analysis method in San Francisco bay area of the USA. The cluster analysis method was used to group the participants. The study confirms that consumers are willing to pay a premium for apples which provide safety in the form of use of less pesticides, though there are substantial differences between consumer segments with respect to their willingness to pay.
Richardson et al. (1994) conducted a study on the perception of store brand quality using a sample of 1564 shoppers in five grocery products in a north eastern city of the USA. The study categorically pointed out that if there is any big difference in price, consumers prefer national brand rather than store brand with the perception of quality, attractiveness and appearance. Consumers are willing to pay a premium for a national brand and are less bothered about price than they do about quality.

Steptoe et al. (1995) examined the motives underlying the selection of food in the UK by using data collected from 358 university students and employees of London. This study has empirically proved that convenience and taste are in the sequential order of importance in food selection rather than health index. Factors such as sensory appeal, convenience of purchase, cost and preference of family and peer group also have a critical role in food selection. However, attributes of food selection vary across different income groups. For the low income group, sensory appeal and taste have an abysmal role in food choice whereas it is critical for the rich. For the low income group, price of the food is a key determinant in food selection.

Nayga (1996) examined the effectiveness of nutrition labeling on food packages among Americans using United State Department of Agriculture (USDA) 1991 data on “Diet and Health Knowledge survey”. The study found that only well educated women use nutrition label information more than others. Health conscious demographic groups gave more importance to nutrition rather than the taste of the food.

Mathios (1998) considered the importance of nutrition label in edible oil markets in the USA using super market scanner data from twenty stores, after the enactment of Nutrition Labeling and Education Act (NLEA) in USA, which prohibits health claims for foods containing more than a certain amount of fat. The study infers that after the enactment of NLEA, consumers have shifted their purchases from cooking oils higher in saturated fat to lower non saturated fat.
Kraak and Pelletier (1998) investigated the influence of commercialism on children in the food purchasing behaviour in the USA using data from the 1987-88 National Survey of Families and Households. The study found that children ask for food items such as sweetened breakfast cereals, candy, desserts, low nutrient beverages and salty snacks which are mostly advertised products for children on the television. Food accounts for over 54 per cent of the total request made by children. Preschool children are making more requests than made by the elementary school age children. The study reported that sugared desserts products account for most of the snack items requested, followed by beverages and salty snacks, such as snacks and pretzels by children. Such a food habit breeds mass prevalence of obesity and other health problems among children.

Glanz et al. (1998) examined the importance of taste, convenience, nutrition, cost and weight control desires in dietary choice of Americans using Multi Attribute Utility Theory. The data set was based on two surveys conducted in the USA by Market Fact Inc which is 5000 sample adult. The second was a lifestyle survey among 2967 people of the USA. Items selected for study were fruits, vegetables, cheese, fast food and breakfast cereals. They found that demographic factors were an important predictor of taste, convenience, nutrition, cost and weight control for consumers. Lifestyle plays an important role in food selection. They found that taste and convenience are in sequential order of importance in food selection in the USA.

Apelbaum (1999) analysed the importance of brand name and quality in the retail food industry using consumer report on 756 brands from 78 food categories in the USA, in 1999. He quotes the cases where a single manufacturer produces private labels and national brands, a situation in which products are of identical intrinsic quality are distributed simultaneously under different brand names and private labels thereby charging different prices. This study argued that an increase in quality by one firm lead to an increase in its price which, in turn will trigger a price decrease by the competing firm. But an increase in brand name recognition by effective advertisement by one firm will cause both firms to increase prices. This article proposes that quality intensifies competition while brand name lessens competitions.
Senaur (2001) in his study on food habits of the USA using Continuing Survey of Food Intakes by Individuals (CSFII) data, AC Neilson data, store level scanner data and annual household level expenditure data for the period 1960-1997, argued that in the present day context instead of income and price, other factors like quality, taste, convenience and other attributes of food products determine food selection. Modern consumers are more concerned about quality and safety of food rather than quantity and price. Although the income elasticity in terms of quantity may be low, the elasticity for much food attributes, such as nutrition and health, safety, convenience, taste and diversity, are quite high. This study observed that as incomes increase, demand is shifting towards high quality, processed and prepared foods that provide convenience and other desired attributes. This study pointed out that taste is the main reason for buying the same brand and brand switching is also influenced by taste.

Leibtag and Kaufman (2003) in their study investigated how the poor people economize on their food spending by comparing the food expenditure pattern of different income levels of US households using AC Nielson home scan data for the year 1998. The poor purchase more quantity of some products than rich do, but spend less. The Poor economize their spending on food by purchasing products of lower quality, generic products and store brand instead of national brand without forfeiting convenience. The poor consume less amount of ready-to-eat food and less quantity of costly meat and fish that save significantly in respect of cost of food.

Mojuduszka and Everett (2003) using IRI Info-Scan, Nutritional quality change data of Massachusetts National leading advertisers data and USDA diet and Health data evaluated the demand on food at the brand level and examined the relative importance of different determinants of consumer food choice for selected food items in the decade 1993-2002 in the USA. The study found that factors such as taste and convenience are outweighing nutrition and health information in the selection of individual brands of food products.
Gradziel et al. (2004) conducted a study about the food shopping habits, brand/flavour preference and frequency of juice purchase among a sample of 269 households that belong to Hispanic community of California, USA in 2001. The study found that food choices are influenced there by lifestyle considerations. Brand preference is found from cereals to processed foods. Convenience is identified as the prime reason for choosing branded and processed food.

Senauer and Goetz (2003) using Household Expenditure data and National Living Standards Survey Measurement data from Peru for the year 2000 conducted a study on the correlation between the growth of middle class people the world over and its impacts on the demand for high value food products. This study confirms that there is an increase in the demand for high value food wherever there is an increase in the size of middle class households all over the world including India and China. With the Peruvian data, they empirically proved that, moving from the 1\textsuperscript{st} deciles to the 10\textsuperscript{th} the consumption of high value/expensive food increases. The study also found that there exists obesity and poverty side by side in all almost all developing countries.

Thiele and Weiss (2003) conducted an empirical study in Germany in 1995 on household’s demand for food variety and factors influencing it using Consumer Panel Research Data for 149 food items from about 4632 German households. The study empirically proved that food variety increases with income and surely so if there are children in the household. The study has made an observation that food variety would be significantly higher if the households reside in larger cities. Educational attainment of the family especially that of the principal wage earner is positively related to food variety.

Roefs and Jansen (2004) conducted a study among 23 obese and 21 lean people in Netherlands about the effects of information in the form of product labels on food consumption. Items selected for the study were milk products. The study found that, label with high fat is consumed less by people in general when compared to a product with low fat in some milk products. The study also found that taste/palatability and novelty were strong determinants in food selection.
Pingali (2004) using FAOSTAT examines the shift that has taken place in diet among the Asians. According to him rapid urbanisation, income growth, spread of super market chains, globalisation and resultant inter connectedness of people are the major factors contributing to the replacement of the traditional diet patterns of Asians with western diet. The study identifies six stylized facts characterizing the change in food demand in Asia, viz. reduced per capita consumption of rice, increased consumption of wheat-based products, increased diversity in food consumed, rise in high protein and energy dense diets, increased consumption temperature zone products and rising popularity of convenience foods.

Carlsson et al. (2005) conducted a study about the quality preference and willingness to pay for quality products in Sweden with a sample of 710 households. Items selected for study include chicken, beef, and pig, egg, milk and flour products. This study employed choice experiment method to estimate economic values of novel food product quality attributes and willingness to Pay (WTP). This study found that the WTP varies across products and among consumers. However, people are willing to pay a premium for quality products.

Ayanwale et al. (2005) conducted an empirical study on the impact of advertisements on brand preference in Nigeria using 315 randomly selected sample users of food drink in the year 2005. The study confirms that both male and female at different age groups were equally influenced by advertisement in their preference for brand. Advertisement and quality are the two determinants that influence brand preference in food drink industry. The study exposes the fact that most of the consumers do not buy whatever is available or affordable but ensure if a product is of good value for its price.

Grunert (2006) evaluated some trends that are found in consumer food choice, food preference and in food retailing sector in the UK, Germany and France using various survey data in the respective countries. The study observed that consumers’ food choice is influenced by food products’ prices, quality and income. Quality perceptions include various attributes like sensory attributes, health, process, and convenience influence food choice. The study has made an observation that consumers’ interest in convenience has been rising considerably over the past decades.
Rashid et al. (2006) examine the determinants of diet quality in Bangladesh using household expenditure data of 7440 households collected by the Bangladesh Bureau of Statistics for the year 2000. In his study, food quality is assessed in terms of food diversity. The study found that as income and education increase, food diversity and desire for quality increase. Woman’s education is a stronger determinant than male education in this regard.

Huang et al. (2006) considered the effect of sales on brand loyalty in the light of orange juice industry in the USA. They used Information Resources Incorporated (IRI) Info scan household panel data for the year 1999. They examined switching behaviour for the two best-selling types of orange juice products; refrigerated and frozen orange juice. The finding of this study was against the existing beliefs that brand loyal consumers never switch over to other brands. To them, this was not true at least in the case of orange juice retail market. However, empirical evidence of switching behaviour by orange juice consumers shows consumers switch from one brand to another as price changes. It is also revealed through the study that as household income rises, consumers are more likely to be brand loyal to a national brand, less likely to be loyal to a private label, and less likely to switch.

In a study on demand for food quantity and quality in China, Gale and Huang (2007) analysed the latest trends in the consumption habits of Chinese people. The data set for the study was China’s National household income and expenditure surveys for 2002 and 2003. The study found that with the increase in income, Chinese consumers are changing their diets in favour of greater quality, convenience and safety in food. When income increases demand for food in quantity increases but after a saturation point, elasticity of demand for quantity becomes zero while quality increases. This quality preference is seen even in the case of cereals that there is a shift in favour of quality rice like japonica rice and imported jasmine rice. The study reported that Chinese consumers are willing to pay a premium for branded food products.
Harris and Shiptsova (2007) investigated the demand for convenience food in the USA using AC Nielsen Home Scan Panel Data. The study observed that during the 60s American households prepared most of their food at home but in the present day situation, more preparation is being done by food manufactures and less at home. The reasons cited for the shift are technological innovations in preservation, packaging, freezing, artificial flavouring, ingredients and equipment like microwave ovens on the supply side and entry of more women in workforce and resultant paucity of time for the preparation of food, busy life and escalating disposable income on the demand side. Youngsters with disposable income prefer new products, mostly convenient foods. The study concludes that as household income increases, the expenditure on ready meals increases.

Dong and Fuller (2007) using Chinese Urban Household Income and expenditure survey data for the period 1981-2004 examined structural changes in urban food consumption pattern in China since the economic reforms. The study confirms that over the last two decades, urban Chinese consumers have dramatically increased their consumption of meat, other livestock products, aquaculture products and fruits and have reduced the consumption of grain-based foods with an up in per capita income. The changes in grain, meat and vegetable consumption are because of income effects. They concluded that with rise in income, food choices have diversity, and consumers’ food preparation and shopping behaviours have changed. The study argues that product attributes rather than the price play a greater role in purchase decisions.

Wadalowska et al. (2008) along with other objective examine the factors influencing food choices among 9339 people of Poland. The study revealed that sensory and functional factors have the biggest influence on food choice. In some food products, taste and freshness are two key determinants of food choice. The factors like taste, freshness, quality and convenience in general have a profound influence on food selection, whereas health and price considerations were moderate.
Frazao et al. (2008) have conducted a study on urban food consumption pattern using US data for consumer expenditure for the year 2004-05 and Euro meter data for various years, argued that with the increase in income, urbanisation and globalization, the world consumption pattern is converging towards a western dietary pattern. Though there is a fall in the proportion of income devoted to food, as income increases the absolute expenditure and cost of calorie increases with income. It is because as income increases the demand for food away from home, the value added, ready-to-eat and convenient food increases. The U.S households seek various attributes of food like taste, variety, convenience and enjoyment for food selection. The study asserted that a shift away from cereal to more processed food causes the cost of calorie to soar. Consumers simply buy processed food for the sake of convenience, sometimes forfeiting quality of the product and the consideration of cost of calorie.

Bardhan et al. (2008) conducted a cross country comparison of diet diversification of developing countries including India and developed countries during the period 1970-2003. They found that diet diversification occurring in India from food grains to non-food grains in a similar fashion of other developing countries. They also observed that the growth rate of consumption of non-cereal items were faster in developing countries than in developed countries.

Allender and Richards (2009) using household panel data gathered by AC Neilson from 1020 US households for the year 2006 analysed the relationship between price discounts given and brand loyalty. The product selected for the study was Ready to Eat (RTE) cereal, wherein strong brand rivalry exists. They pointed out that the price discount strategy of attracting consumers depends upon how many consumers can be convinced with price discounts and how many are brand loyals. However, the study exposes the fact that strong brand loyalty exists in the RTE cereal industry. Therefore price reduction strategy is less effective which means consumers are price insensitive in the case of branded products, at least in the case of RTE cereals.
Cramer and Antonides (2010) in their study addressed the effects of endowments on hedonic and utilitarian food products choice decision among 554 pupils from different cities of Netherlands. The study concluded that more and more people preferred to keep their hedonic good than their utilitarian good in endowment indicating a relatively strong endowment effect for hedonic food products compared to utilitarian food products. They inferred that a bias for hedonic food products may lead to relatively unhealthy food choices. In their case, owing to low levels of involvement and time constraints, food choices are often based on simple determinants like taste or convenience.

Leenes et al. (2010) carried out a study on food consumption pattern and economic growth using the FAO Food Balance Sheet for 57 countries in 2001. In their study, they considered the relationship between food supply, consumption and income. They find a large gap between food supply and consumption. The study found that throughout the world a nutrition transition is taking place, in which people are shifting towards more affluent food consumption patterns. In low income countries with an increase in Gross Domestic Product (GDP), there is a tilt towards western consumption pattern. The study predicts that in the coming years, large changes in food consumption patterns are likely to occur in India and China.

Bronnenberg et al.(2010) investigated the long-run evolution of brand preferences, using data on consumers’ life histories and purchases of consumer packaged goods. The data set used for the study was Nielsen Home Scan (USA) data for 238 packaged goods with details of consumers’ life histories. The study throws light the fact that the past experiences are an important driver of current consumption. The past advertising influencing current willingness to pay above and beyond the effect of past consumption.

Lobera and Rios (2011) conducted a study among 255 women and 50 men aged ranging from 25 to 64 years in Spain to analyze the psychometric properties of the Food Choice Questionnaire (FCQ). The factor analysis method has identified seven factors in food selection, viz, mood, health and natural content, sensory appeal, weight control, convenience, familiarity and price. Sensory appeal has been identified as the most important motivating factor in food selection, followed by price and weight control.
Some food choices are based on the prestige of certain foods in order to denote a high social status. Health and convenience factors are not relevant in the case of the sample study in Spain.

Becker et al. (2011) examined the influence of packaging design on the taste impression of people in Germany using a data collected from 151 customers aged between 15 and 81 years of a large German supermarket. The study found that visual design parameters, such as packaging, colour and packaging shape influence product evaluations and purchase decisions.

Rask and Rask (2011) conducted a study on the issue of food crisis in the world in the light of economic advancement of some developing countries of the world including India and China using FAOSTAT for the period 1961-2002. They argued that economic advancement and resultant rise in per capita income in developing countries as a group have resulted in more than 300 per cent increase in demand for food in these countries. The main reason for such an increase in food demand is a diet change that occurred in these economies from grains to vegetables, fruits, meat, dairy and fish products. Such an affluence in the later stages leads to an increased demand for non agriculture resource such as processing, packaging and away from home eating rather than increased absolute food consumption.

Nguyen and Winters (2011) in their article explore the relationship between migration and consumption in Vietnam using a panel data (Vietnam Household Living Standards Surveys) for the period 2004 and 2006. The study found out a positive relationship between migration and resultant rise in wage on consumption pattern. They observed that the intake of nutrition varies according to the degree of food diversity.

**A Review of National Studies**

In a study on the changing pattern of consumer demand for food grains in India, George (1980) analyzed the structural changes in the consumption pattern of India for the period from 1961-62 to 1973-74 using NSS data for the period by quartile group analysis method. The study pointed out that in India, per capita consumption of overall cereals has declined both in rural and urban areas while there was an increase in the per
capita consumption of wheat in all quartiles except the top. The study has made an observation that the success of the PDS in the urban areas helped the constancy of per capita consumption of low income consumers of the urban areas.

Mittal (2006) using NSS data for the rounds 38th, 43rd and 55th analyses the food basket of India and driving forces for a change in food basket of both rural and urban households under different expenditure groups. The study found that with high growth rates in the agriculture sector, the average per capita income in the country has increased and along with there is a visible diversification in the food basket of the people. In India even though cereal continues to be the important part of household’s food basket, its share in the total budget is declining. Importance of high value foods such as vegetables and fruits, milk, meat, fish and egg is increasing. These foods are rich in protein, essential vitamins, minerals and micro nutrients. The possible fall in the calorie intake due to a fall in the intake of cereals is found to have been well compensated by the intake of high value food items which are rich in calorie and micronutrients.

Giri (2006) examined the level and pattern of consumption of cereals both in rural and urban India over the period 1987-2004 using NSS data. He observed that consumption pattern vary across States and rural and urban areas. Consumption pattern is shifting in such a way that consumption of cereals are declining both in rural and urban areas and non-cereals are increasing. The study found that the national average consumption of both rice and wheat declined upto 2001 and again during the period 2003-04.

Golait and Pradhan (2006) analysed the the nature of shift in consumption pattern in india using NSS data on 43rd, 55th and 57th round. The study observed that consumption of cereals is declining in urban India compared to the rural. Fall in consumption of cereals is more pronounced in the case of smaller cereals like barley and millet than rice and wheat. The study found clear shift in preference towards some costly non-cereal food items like meat, fish, fruits and vegetables.
Kumar et al. (2007) provided an empirical disclosure about the nature and extent of long term changes in consumption patterns and nutritional status of various socio economic groups in India. Data set used for the analysis was NSS data for 38\textsuperscript{th} and 55\textsuperscript{th} round. The study found that consumption of coarse cereals has declined in India while that of high value food increased because of a change in taste and preference. A fall in the calorie intake from cereals is noticed and is found compensated from milk, vegetables, fruits meat and sugar. The study concludes that as income rises, households generally diversify their food diet pattern by shifting towards high value and high quality food items. Increase in income, urbanisation and consumer perception regarding food quality and safety were influencing these changes in the diet pattern.

Philip (2007) examined the relationship between advertising and consumption employing the co-integration methodology to validate the evidence of soundness of advertising and consumption pattern of India during the period 1980-2006. The data for the study was taken from the NAS (2006) and the Economic Surveys (various issues) published by the Government of India in the form of annual long-run time series data on consumption and advertising expenditure for the period 1980-2006. The analysis reveals that there is strong bi-directional relationship between advertisement and consumption pattern in India. The study reveals that an increase in advertising expenditure can have a positive impact on consumption.

In a unique study Morrisset and Kumar (2008a) examined the trends and patterns of consumption of value added food products in India using NSS data for 55\textsuperscript{th} and 61\textsuperscript{st} round. This study observed that there is a shift of expenditure in food from cereals to pulses, edible oil, dry fruits, beverages and other processed food. This study analysed the shift in the consumption pattern of different food products according their degree of processing among different income strata. The study found that the proportion of expenditure devoted to primary products does not show much change with an increase in income. But the consumption of food with high degree of processing is increasing with income. The higher income groups are consuming more of products with a higher level of processing. Their analysis of urban consumption pattern shows that States with high consumption of processed foods were the ones with major metros.
Shroff and Jayanti (2008) using NSS data for the period 1988-2002 and other data sets analysed the structural shift that has occurred in Indian food consumption pattern. The study found that there is a structural shift with in food grain to non-food in India during the period. They observed a very low or near zero income elasticity of demand for cereals for the population as a whole and suspect a positive income elasticity of demand for low income household for the same. However, the same has not verified in their study.

Mittal (2010) examined the shift in food consumption pattern in India in the light of economic development using NSS 38th, 43rd and 55th round CES results. The study optimistically asserted that the Indian economy is in the path of moving from a supply driven economy to a demand driven economy. As a result of that, the relationship between expenditures and income change may not be linear. The study finds a positive correlation between urbanisation and expenditure on food. The study recognizes a change in the taste and preference of the Indians over a period of time. Urbanisation has a negative effect on cereals, pulses and sugar consumption and positive effect on vegetables, fruits, milk and edible oil consumption. The demand for high value foods is more income elastic when compared to the staple food. The study has made an observation that high value food is found to be very price sensitive in India.

Chatterjee (2010) using NSS data for 43rd, 50th and 55th round survey examines how the patterns of India’s food consumption has been changing in recent times in line with its faster economic growth and generally rising affluence levels. The study also presents evidences on the nutritional implications of these observed changes in the food consumption patterns. The study confirmed that there has been a marked decline in the consumption of the cereal items and a switch towards non-cereal items such as meat/fish and fruits/vegetables in both rural and urban areas. Even with a shift from cereals to non-cereals, rice and wheat continue to supply well over 50 per cent of the total calorie intake of the households. Another important observation of the study is that urban households spend a greater share of their expenditure on processed food and beverages.
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Minten et al. (2009) carried out a study on food supply chains in India and its link with rural and urban consumers, using FBS, NSS, census data and data from a primary survey conducted among 480 persons in Uttarakhand in India in 2007. The study has made a remark that overall urban consumption in India and in the world is increasing and the food basket is shifting away from staples to high value products such as dairy products, meat, fish, fruit and vegetables. They concluded that Indian consumers now require variety and choice in food, more processed food and are increasingly concerned about the quality of products. This shift in favour of processed and packaged food is due to urbanization, technological change, growth in income and life style changes such as the entry of more and more women in labour force.

Nandgopal and Chinnaiyan (2003) conducted a study about brand preference in soft drinks in rural Tamil Nadu using the technique of Garret ranking to identify the influencing factors for preferring branded soft drinks. The study found that quality and price were two important factors that influence the choice in the sequential order of importance in the case of soft drinks.

Sooryamoorthy (2007) provided a useful compendium of authentic information on various aspects of consumerism in Kerala using NSS consumer expenditure data for the period 1973-74 to 1986-87. This study is a pinpointer of the danger of moving to consumerism. The study exposed the fact that consumerism pervades the life of each and every Keralite whereas conspicuous consumption is only among some sections of people. However, the food basket under the category of cereals and cereal substitute has not turned out to be so conspicuous in rural and urban areas of Kerala. The driving forces behind a move from consumption to consumerism are urbanisation, open nature of the society, foreign remittance, liberalized policies, media advertisement, proximity to market, hire purchase facilities, ostentation and emulation of consumers.

Maithili (2008) conducted a study on consumer expenditure pattern of rural and urban Kerala, using a sample of 300 households of Thrissur and Kochi city corporations and adjacent rural areas. The study found that consumption pattern in the State as a whole is shifting from food to non-food and the consumption level is very high when
compared to other States of India. The propensity to consume of the urban people is very high compared to the rural. The study observed that consumerism pervades into the life both rural and urban inhabitants of Kerala. The purchasing power of people in Kerala is induced by the factors like changing life style, standard of living, modernisation and growing employment opportunities.

Amarnath and Vijayudu (2011) conducted a study among 100 respondents of Chittur district of Andrapradesh using Food Choice Questionnaire (FCQ) to find out the attitude of rural consumers towards branded and packaged food products and the factors to influencing their choice. The study found that only the upper income strata prefer branded food products. Important factors that influence its selection were convenience, sensory properties and value for money.

Rosamma (2012) investigated the extent of change in consumption pattern of Keralites using a randomly selected sample of 600 households from Kottayam and Alapuzha district. The study found a significant change in the consumption pattern of Keralites from food to non-food and within food from cereals to non-cereal items. The study found that, there is clear shift for packaged foods even in cereals among rural and urban households. Changes in life style, preference for taste and quality, influence of peer and neighbours, increasing income, etc. are identified as some of the specific economic and psycho-social factors influencing such a change.

2.2.2.2 A Review of Studies on Shift within Food and its Impacts

Popkin (2003) using NSS data for India and National Survey of Health service data of China observed that when income increases, the rich income group spends their increased income on fatty foods. Such a tendency in food habit shifts these economies from the problem of famine in olden days to NR-NCD disease in the modern era. However, the study has made an observation that there exists undernutrition and overnutrition side by side in these economies. The prevalence of diabetes is also increasing among both the poor and rich owing to a shift in food habit and physical inactivity. This problem is very acute among the urban dwellers. This study pointed out that in India nutrition deficiency accounts for 0.7 to 1.1 per cent loss in GDP at the same time NR- NCD to cause 0.35 per cent fall in GDP.
Schimidhuber (2004) investigated the impact of overnutrition in advanced and developing economies of the world. This study observed that there is a rapid transition from hunger and undernourishment towards overnutrition and affluence in many developing economies. This study has made an observation that the problem of obesity is more severe than hunger and chronic undernourishment in most developed and many developing economies of the world. The modern food consumption pattern is responsible for raising the problem of obesity. The study proposes some policy options to tackle the problem of obesity epidemic in the form of market interventions.

Popkin and Wen (2006) using FAOSTAT conducted a study on dietary changes that have taken place both in the rich and poor economies and their impacts on NR-NCD. To them the burden of obesity is shifting from the rich to the poor economies not only in urban but also rural areas throughout the world. Their study shows that urban levels of overweight are typically above those in rural areas. Overweight status is far greater than underweight and undernutrition status in both urban and rural areas of most developing countries. A shift in occupation from rural manual work to urban service sector job and sedentary lifestyle has been cited as a major cause for the increased incidence of obesity in these economies.

In a study on food expenditure pattern of the USA using Dairy survey data of USA for the period 2001 and 2002 Fan et al. (2007) found that obesity is increasing in the USA. This study identifies two causes like overconsumption of food other than milk and also low consumption of milk, dairy products bread and other cereal products for obesity. The study exhibits that food taken outside home is also a major cause for rising obesity in the USA since such food contains excess calorie. Increased entry of women in labour force has increased the intake of food away from home. It was also found that young people are consuming more of the food away from home, as also sweeteners and modern junk foods.

Halford et al.(2007) investigated the impact of T.V. advertisement on the calorie intake of children in the age group of 5-7 in the U. K. using a sample of 93 students of a school in the year 2006. Five foods selected for the study were grapes, jellies, chocolate buttons, crisps and low fat savoury snack. The study shows that the total calorie intake
was significantly higher after an exposure to T.V. advertisement. The energy intake of the children from chocolates and jellies is significantly greater than from grapes, former being a product with T.V. advertisement. The study indicates that exposure to food advertisement increases energy intake in young children regardless of their weight status. The greatest increase in calories came from the intake of sweet foods.

Rosen and Shapouri (2008) using FAOSTAT and USDA data conducted a study on the food habit of developing countries. The study observed that there exist obesity and food insecurity side by side in less developed countries. Urbanisation is a key factor for the rapid diet change. The diets of the upper income group have changed from traditional foods to high calorie modern processed food. The study has made an observation that a shift to more and more processed food is not at all unique to advanced countries but is increasingly seen in least developed countries as well. Urbanisation and increased participation of women in the workforce and resultant paucity of time have increased the consumption of processed foods. In many developing countries, the prevalence of obesity and overweight is increasing among all especially among the rich group. They conclude that this new trend in diet pattern may replace the traditional problem of undernutrition with overnutrition and resultant obesity in many developing economies.

Smith et al. (2011) examined the impact of diet change in the USA using the U.S Data on Agriculture (USDA, 2008) and other data sources. The study has made an observation that it is the changes in food habit that have taken place in the past century in favour of increased use of more and more processed and ready-to-eat food that had made America a country with an epidemic level of obesity, diabetes, heart diseases and cancer. This study observed that modern consumers seem to care more about palatability or convenience than about the health consequences. Because of paucity of time and search cost, people had begun to rely upon the reputation of brand name to signal quality. The study reveals that excessive food processing degrades nutritional quality of food and it causes the elimination of micro nutrients from food. At the same time, it adds dietary acids that cause mass obesity and heart diseases.
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Shariff and Mallick (1999) in their study examined the effect of change in food habit and its impact on nutrition intake of the people of India for the period 1970-71 to 1993-94 using the NSS data. The study observed that Indian food basket has changed drastically and expenditure on cereals has declined and that of other foods has increased during the period. Such a compositional shift has its own dent on the calorie intake and nutrition level of the people. The study has made an observation that shift in favour of refined cereals has reduced fiber content of Indian diet. They observed that India has the nutritional problem of too much on the one side and too little on the other. People of the lower strata are starving for recommended amount of energy, protein, iron calcium and fat while people of higher income strata consume double of the recommended amount. Fall in consumption of cereals has been quoted as a reason for undernutrition among the poor.

Shetty (2002) conducted a study on demographic and nutrition transition in India in relation to its effects on emerging epidemic of chronic non-communicable diseases in India using different survey results such as NSS, Census data, state specific studies and research articles. The study also examined the impact of rapid urbanisation and globalization on Indian food consumption pattern. The study has made an observation that the demographic changes, rate of urbanisation, opening up of the economy and changes in dietary patterns were contributing immensely to the new trends in chronic disease including obesity in urban India. In India, the upper income strata have a high prevalence of LSD when compared with the poor. With the opening up of economy, there is a westernization of Indian food at least among the urban people. These western foods are mostly rich in calorie. Excessive calorie intake along with sedentary life style causes an epidemic of obesity and other NCD’s in India. The study has made a remark that it is globalization that integrates more consumer market especially food markets than other. Such an integration leads to conspicuous consumption, competitive spending that caused in widening the already existing consumption inequality among the rich and poor.
Vepa (2004) analysed the impact of globalization on Indian urban consumption pattern using NSS data for the period 1983 to 2000. In urban India, consumption pattern has changed a lot. Consumption of rice, wheat and pulses has declined and that of milk, flesh food, egg, tea, milk fats, biscuits, salted refreshment, prepared sweets, vegetables, edible oils and sugar have increased. Consumption of processed and ready-to-eat food like biscuits, prepared food and salted refreshment has shown an increase during the period. She stated that a shift towards processed food causes the cost of calorie to soar. The demonstration effect and the availability of variety of foods, some of which may be more nutritious than cereals, could be some of the reasons for an increase in the cost of calories by the urban people.

Ray (2005) examined the changes in the nature of household spending on food in India over a period of time stretching from the late 1980s to the early part of the new millennium. The study also examined the cause of decline in calorie intake in the post reform period using NSS data for the rounds 43rd, 55th and 57th. The study found that a shift from least cost cereal to costly food items such as fish, meat and egg, causes calorie intake to fall. However, rice and wheat continue to contribute a larger part of the calorie intake. The contribution of rice to the total calorie intake goes down and that of wheat has increased with the increase in income in both rural and urban sectors. Dietary diversification in urban areas goes beyond the limit of cereals products.

Radhakrishna (2006) reviews the trends over three decades in the consumption of cereals, calories and micronutrients and nutritional status of India based on anthropometric measures using the data sets of NSS, NNMB and NFHS. The study provides an explanation for the slow growth of nutrient intake and a slow reduction in malnutrition. It is proved with the NSS data that the per capita cereal consumption has been declining since the early seventies and as a result it leads to nutritional deficiency among different income groups. The study identifies that, a shift from least cost cereals to costly foods is a cause of calorie intake to decline. The study revealed that there has been a substantial diversification of Indian food basket in favour of non-cereal food items over the years. The sources of energy from food and food diversity vary across the poor and rich income strata, especially in urban areas.
Subramanian et al. (2007) made a study about income inequality and the double burden of under and overnutrition in India using NFHS data of 77220 ever married women in 26 States for the period 1998-99. The study revealed that income inequality, over-undernutrition and obesity/overweight are increasing in India. In many States there is a paradoxical co-occurrence of overnutrition among the well-off sections and undernutrition among the poor. The co-existence of both under and overnutrition leads to maternal obesity, high birth weight and high risk of diabetes among newborn babies. The contributing factors towards obesity and overweight are change in the nature of work, improved transportation facilities, the expansion of mass media and the increased consumption of energy rich foods.

Chatterjee et al. (2007) examined how the patterns of India’s food consumption changed against her faster economic growth and generally rising affluence levels. The data sets used in the analysis were from the 43rd, 50th and 55th rounds NSS data. This study challenged the conventional wisdom that increased affluence would improve the general level of nutrition of most households in a developing economy and empirically proved that there is a widespread decline in food calorie intake, i.e. reduced nutrition among Indians during the study period. The study also claimed that cereals continue to supply well over 50 per cent of the total calorie intake of an average Indian household.

Kalamkar (2008) using FAO and Agriculture statistics of Government of India and other data set analysed the impact of diet diversification in India. The study observed that a fall in the total calorie intake among upper income group is due to the diversification of diet. However diet diversification to cause excess intake of calorie since they lead a sedentary life.

Deaton and Dreze (2008) using NSS data for the period 1983-2005 examined the trend of nutrition in India in relation to its fast economic growth and calorie intake. The study found that though per capita income increased at a rate of 3.9 per cent during the period 2000-2005, calorie intake is declining in India. They have made an observation that a fall in calorie intake is not worrisome, as calorie requirement in India declines due to improvements in the health environment and work nature. The study
observed that there is no close link between income and calorie intake. The study has made observations that though poverty has declined in India, consumption inequality is widening. The study also exhibits a trend of a shift of expenditure from food to non-food. In the case of the urban people, there is a significant fall in the consumption of cereals. However, there is a sharp increase in the consumption of high calorie content fatty food.

Gaiha et al. (2009) conducted a study on pervasive eating out habit, consumption of snacks, pre-cooked meals and beverages in India and their various implications and ramifications. The analysis was based on a rich household survey in 2005, conducted jointly by the University of Maryland and NCAER under the title of India Human Development Survey 2005 (IHDS). IHDS covers over 41000 households residing in rural and urban areas selected from 33 States. They confirm that even more deprived sections—not just in metros but also in rural areas, are not insulated from this evolving dietary pattern in favour of eating out and consumption of snacks and resultant health risks of NR-NCD diseases. They identified the factors like urbanisation, emergence of nuclear family system with more earning members, age composition of people in favour of youth, mass desire for advertised products and rapid growth of super markets and fast food outlets as responsible for the change in the dietary pattern of Indians. They predicted that use of rice and wheat as a principal component of food has been changing fast and it is going to be replaced by commercialized and westernized food products.

Li (2009), using data from NSS over the period 1983-2005, analysed the welfare gains to Indian households from consuming an increasingly diverse basket of goods over the last two decades. The study empirically proved that in comparison to a standard cost of living index, food variety makes urban households 2 per cent better off than rural households and makes the average household 3.5 per cent better off in 2005 than in 1983. Though urban areas are more expensive in the case of food, they have an easier access to a wider variety of food. The study reveals that quality driven growth in expenditure on food in India is mistaken as due to inflation. The study pointed out that, variety and quality seeking in foods may cause average real cost of calorie to increase. If the average calorie intake falls even with a real increase in the expenditure on food, there is quality preference and variety seeking in food.
Deaton and Dreze (2009) in another study analysed why there is a fall in calorie intake and consumption in India even then there is a rise in the real per capita income in India in the last decades, using NSS data for thick samples from 38th to 61st round. The study demonstrates that there is a shift in the food consumption pattern from the cheapest source of calorie like cereals to high cost sources of calorie like fish and meat that cause cost calorie to increase. Richer groups devote a larger share of their expenditure to fattier and sweeter foods, such as edible oil, meat, sugar, sweets and chocolates. Households that spend more in total also spend more per calorie. The study has made an explicit observation that consumption of junk food is increasing in India. The decline of per capita consumption is not only limited to calories but also to proteins and many other nutrients. However, the intake of fat has increased steadily during this period across all classes.

Adatte (2010) using NSS CES results for 50th and 61st round analysed the nutritional implications of changes in the consumption of cereals in the light of decline in the consumption of the same and a fall in the intake of calorie in India since 1990’s. The study found that, except bottom 20 percent expenditure group, there is a decline in cereals consumption in rural India since 1990’s. He observed that there is a fall in the intake of calorie among all with a shift from food grain/cereals to non-cereal food grains. However, such a diversification to have serious implications on poor than the rich. It is also suggested that raising cereals consumption is the cheapest way to combat calorie deficiency.

Gaiha et al. (2012) in another study, using NSS data for 50th 61st and 66th round examine the changes in Indian diet pattern during the period 1993-2009. They found that dietary patterns has shifted away from cereals to fruits, vegetables, oil and livestock products. They also constructed a Food Diversity Index (FDI) by which it was found that food diversity has increased in urban India over the years. The study inferred that better quality diet and higher intake of nutrients are not corroborated. Though there is a decline in the intake of calorie with diet diversification, it was found that intake of protein and fat increased during the study period. The study observed that sedentary life style is a contributing factor for diversifying diet in urban settings which in turn increases the burden of life style diseases among urban dwellers. Education is also identified as a
factor positively correlated with diet diversity. With respect to eating out habit, the study reveals that it is urban dwellers who spend heavily on eating food outside.

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Subramanian and Deaton (1996) have made a study on nutrition and calorie cost in rural Maharashtra using NSS 38\(^{th}\) round data which consists of 5630 households. The study examines whether the intake of calorie increases with economic growth and income. The study proved that an increase in the intake of calorie is not proportional with increase in income and food expenditure. It is because of the substitution of food quantity with food quality. The expenditure elasticity for calorie for the poor is high when compared to the rich. There is a substantial difference in the cost of calorie between the rich and the poor that the rich pay twice of the poor per unit of calorie. The poor earn maximum calorie from cereals, the cheapest source of energy, that cause a significant difference between the rich and poor in the cost of calorie. The study empirically shows that a 10 per cent increase in food expenditure is associated with a 5 per cent increase in calorie intake and 5 per cent increase in the cost of calorie.

Behrman and Deolalikar (1987) examines whether nutrition intake improves with income using International Crops Research Institute for the Semi Arid Tropics (ICRISAT) Village Level studies’ data of 240 households of rural south India. The study found that increments in income and food expenditure would not result in substantial improvements in nutrient intakes among rural south Indian people. It has also been observed in the study that cost of nutrients increases with income.

ICMR (2009) in a study on the incidence of NR-NCD in Kerala, conducted an empirical survey among 4859 households of Kerala (2185 urban and 2235 rural) in the year 2007-08. Among other findings, it was reported that the incidence of NR-NCD is pervasive among Keralites irrespective of age, gender and occupational status. About 47 per cent were detected with pre hyper tension stage and one fourth of the population was in stage 1 and stage 2 hyper tensions. 27 per cent of the population was obese/overweight. Incidence of diabetes is also high among the people of Kerala. Comparatively the problem is very acute among urban dwellers. The prevalence of these
LSD was more pervasive among those people who are pursuing executive job and a sedentary life.

2.2.3 Research Gap

Both consumer expenditure and brand preference are two favourite research fields for many. There have been a huge quantum of research and empirical models on consumer expenditure, food consumption inequality, factors influencing food choice and shift in consumption pattern and its nutritional implications on the one side and on the other side there is enough literature and empirical models on brand preference in food and brand loyalty. But there is a lacuna of literature both at national and regional levels on integrating the effects of brand/quality preference in food and its impacts on family budget, inequality, cost of calorie and its health implications. There are certain studies at national level, though in a limited scope, which analyse a shift within food itself to processed, branded, convenient, ready-to-eat food, food-away-from home and its implications. However, there is a dearth of literature pertaining to all these aspects concerning different urban income strata of Kerala. In addition to that there are a lot of studies which report various aspects of food consumption pattern in Kerala. But there is a lacuna in the literature about urban food consumption inequality in Kerala.

Overall review of comparative studies indicates some contrasting conclusions with respect to purchase behaviour across people. There are a few studies which reveal that one important factor that determines food selection is quality. Others observed that it is price, taste, convenience, sensory attributes, packaging, country of origin, natural content, product labels and health factors. There are other studies which found that there is price sensitivity among people in regard to food. On the other side, there are large volumes of studies which exhibit that there are strong brand preferences existing in food market and a lot of consumers are brand loyal. Studies are also there which reveal that brands are not advisable since they charge premium price, increase cost of food and cost of calorie. On the contrary, some studies indentify the fact that brands are a virtue, since they ensure quality in a world where quality is uncertain. Some of the contrasting findings from various comparative studies have been attributed to difference in research methods, experimental conditions, product selected for study, difference in social group,
difference in stages of economic development and country specificity. However, there is a dearth of literature on the purchase behaviour of urban people of Kerala among different income strata with respect to food.

There are studies with regional and national perspectives which have concentrated much on the consumption of nutrient rather than nutrient price. Estimates regarding nutrient price/calorie cost among different income strata in a national perspective are scanty. Yet, no serious attempt so far had been made to estimate the nutrient price/cost of calorie of Keralites among different urban income strata. This study attempts to address these key gaps in the literature.

2.3 Theoretical Underpinnings of the Study

Theoretically the present study is indebted to many market and consumer behaviour models. A brief review of some of the important models which have a close linkage with the present study is given in the present sub-section.

A market model that best fit with the analysis of the purchase behaviour of branded food products seems to be the Chamberlin’s (1933) model of monopolistic competition. It is a market structure where there are many producers who sell differentiated but not identical products. Differentiation is done by branding, quality variations, packing and also by certain sensory attributes, especially in the case of food products. The modern multinational outlets like McDonald and Kentucky Fried Chicken (KFC) attract urban youth by offering a variety of tastes in the same product category. Here, each fast-food provider offers a product that is differentiated from its rivals’ products. Products in this case are close but not perfect substitutes. Economists call such a market as a market of monopolistic competition (Krugman and Wells, 2012).

There are certain income theories such as, Absolute Income Hypothesis (Keynes, 1936), Permanent Income Hypothesis (Friedman, 1957), Life Cycle Hypothesis (Ando Modigliani and Brumberg, 1963), Normal Income Hypothesis (Farell, 1959), Relative Income Hypothesis (RIH) (Duesenberry, 1949), etc., which analyses the influence of income on consumption behaviour of an individual or a household. All these models provide a theoretical foundation for the present study. However the RIH is
particularly important in analysing consumer behaviour of urban dwellers of Kerala. RIH postulate that consumer preferences are interdependent and emulative that without much change in income people of lower income strata imitates the consumer spending behaviour of upper income strata. This behaviour is particularly important in analysing the purchase behaviour of branded food products by the people of lower income strata.

Since the objective of the present study cannot be addressed fully with the income theories, a brief review of some important consumer behaviour models which have a close linkage with the study is given in the following sub-sections.

2.3.1 Consumer Behaviour Models

There are some consumer behaviour models which provide ample explanations for food purchase behaviour of individual households. Brief accounts of such models are given in the following sub-sections.

2.3.1.1 Engel Functional Forms

Ernst Engel (1857) published a study on the conditions of production and consumption in the United Kingdom in which he formulated an empirical law concerning the relationship between income and expenditure on food. The law is “the poorer a family is, the greater is the proportion of total outgo (total expenditure) which must be used for food”. It is obvious that this law is related to food and the poor only. But later on, it was extended to all items of consumption and to all economic and social classes. Thus, this law is generalized and is known as Engel’s law. It states that as income rises, the proportion of income spent on food falls, even if actual or absolute expenditure on food rises (Allen and Bowley, 1935). Technically income elasticity of demand for food lies between 0 and 1. Elasticity of demand for non-food and durables rises with income, whereas elasticity for food falls with income. In the present study to portray and to analyse the consumption pattern, the basic principles of Engel’s law are used.
The study traces its theoretical base in Engel’s law. To classify food items into luxuries, necessities and inferior we have used Engel elasticities. It is defined as, if the expenditure elasticity (ee) is greater than one, those goods are luxuries, if ee<1; those goods are necessaries and if ee=0; goods are inferior.

Engel functions are based on certain criteria like; economic criteria, statistical criteria and other criteria. Of the various criteria, the economic criteria are particularly important in analysing food purchase behaviour. Economic criteria tell us that households will purchase a commodity only if they have a minimum amount of income. If income falls short of the critical minimum (tolerance income), the household will be deprived of the consumption of that commodity (Aitchison and Brown, 1957). On the other hand commodities are purchased only with an income above a particular level. If income increases further the quantity consumed of that commodity will not rise indefinitely. There is a saturation level for consumption. When this saturation level is reached, there is no further increase in the quantity consumed even then there is an increase in income. This saturation level ignores price changes. If price variations are admitted, there is a substitution of inferior goods for superior varieties if price moves in the upward direction.

At the saturation point, the income elasticity of demand for the item is unity. The income-consumption combine corresponding to this level of income in the Engel curve is referred to as luxury point (Prais and Houthakker, 1955). To the left of the point income elasticity of demand is negative and to the right it is less than unity. Then before the saturation level the commodity is luxury and after that it becomes necessary. Therefore, there is a transformation for the same commodity as in the early life when income is low it is luxury in the later state when income rises it becomes a semi luxury and finally it becomes just a necessity. This principle can be effectively applied to the purchase behaviour of food items. Certain branded food products and other high value food items like milk, fish, meat, fruits, vegetables, etc. may be a luxury at a low level of income. When income increases quality elasticity also increases and these items turn out a necessity.
There are a good number of Engel functional forms with unique characteristics to suit various requirements (Table 2.1). However, of the several forms, semi-log function is appropriate for analysing food consumption behaviour. The double log function of Engel is used in the present study to estimate various elasticities.

### Table 2.1: Characteristics of commonly used Engel Functions

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Function</th>
<th>The curve</th>
<th>MPC</th>
<th>Elasticity Measure</th>
<th>Positive expenditure level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Initial (Lowest)</td>
</tr>
<tr>
<td>(1)</td>
<td>Linear</td>
<td>$Y = \beta_1 + \beta_2 E$</td>
<td>$\beta_2$</td>
<td>$\beta_2 E / Y$</td>
<td>$0$</td>
</tr>
<tr>
<td>(2)</td>
<td>Semi-log</td>
<td>$Y = \beta_1 + \beta_2 \log E$</td>
<td>$\beta_2 E$</td>
<td>$\beta_2 Y / E$</td>
<td>$e \beta_2 / \beta_1$</td>
</tr>
<tr>
<td>(3)</td>
<td>Double-log</td>
<td>$\log Y = \beta_1 + \beta_2 \log E$</td>
<td>$\beta_2$</td>
<td>$\beta_2$</td>
<td>$\beta_2$</td>
</tr>
<tr>
<td>(4)</td>
<td>Hyperbolic</td>
<td>$Y = \beta_1 + \beta_2 E / \beta_3$</td>
<td>$\beta_2 / \beta_3$</td>
<td>$\beta_2 E / Y$</td>
<td>$\beta_2 / \beta_1$</td>
</tr>
<tr>
<td>(5)</td>
<td>Log-inverse</td>
<td>$Y = \beta_1 + \beta_3 / E$</td>
<td>$\beta_3 Y / E^2$</td>
<td>$\beta_3$</td>
<td>$E / \beta_3$</td>
</tr>
<tr>
<td>(6)</td>
<td>Parabolic</td>
<td>$Y = \beta_1 + \beta_2 E + \beta_3 / E^2$</td>
<td>$(- \beta_2 + 2 \beta_3 E) / 2 \beta_1$</td>
<td>$- \beta_2 + (\beta_2 - 4 \beta_3) / 2 \beta_1$</td>
<td>$-$</td>
</tr>
<tr>
<td>(7)</td>
<td>Log-linear</td>
<td>$\log Y = \beta_1 + \beta_3 / \log E$</td>
<td>$\beta_3 / E / \log E$</td>
<td>$\beta_3$</td>
<td>$0$</td>
</tr>
<tr>
<td>(8)</td>
<td>Turnquist system</td>
<td>$Y = \beta_1 + \beta_2 (E - \beta_2)$</td>
<td>$\beta_2 (E + \beta_2)$</td>
<td>$\beta_2 (E + \beta_2)$</td>
<td>$0$</td>
</tr>
<tr>
<td>(9)</td>
<td>Relative luxuries</td>
<td>$Y = \beta_1 (E - \beta_2)(E + \beta_3)$</td>
<td>$(Y / E) (\beta_2 + E) / \beta_2$</td>
<td>$\beta_2 (E + \beta_2)$</td>
<td>$0$</td>
</tr>
<tr>
<td>(10)</td>
<td>Luxuries</td>
<td>$Y = \beta_1 (E - \beta_2)(E + \beta_3)$</td>
<td>$(Y / E) (\beta_2 + E) / \beta_2$</td>
<td>$\beta_2 (E + \beta_2)$</td>
<td>$0$</td>
</tr>
<tr>
<td>(11)</td>
<td>Laser forms</td>
<td>$Y = (\beta_1 + \beta_2 \log E) / (\beta_1 + \beta_3 \log E)$</td>
<td>$\beta_1 \log E$</td>
<td>$\beta_1 \log E$</td>
<td>$e \beta_1 / \beta_2$</td>
</tr>
<tr>
<td>(12)</td>
<td>Logistic</td>
<td>$Y / E = \beta_1 + \beta_2 E / \beta_3$</td>
<td>$\beta_1 \log E$</td>
<td>$\beta_1 \log E$</td>
<td>$- \beta_2 / \beta_1$</td>
</tr>
<tr>
<td>(13)</td>
<td>Lognormal</td>
<td>$Y / E = \beta_1 + \beta_2 \log E$</td>
<td>$\beta_1 + \beta_2 \log E$</td>
<td>$\beta_1 + \beta_2 \log E$</td>
<td>$e \beta_1 / \beta_2$</td>
</tr>
<tr>
<td>(14)</td>
<td>Lognormal</td>
<td>$Y / E = \beta_1 + \beta_3 / E$</td>
<td>$\beta_1 \log E$</td>
<td>$\beta_1 \log E$</td>
<td>$0$</td>
</tr>
</tbody>
</table>

Source: Mahajan, B.M (1980) “Consumer Behaviour in India” p.184. $\beta_1, \beta_2$, respective parameters $Y = \text{item expenditure}, E = \text{Total expenditure}$

### 2.3.1.2 Bennett’s Law

Another important law that supports the present study is Bennett’s law named after M.K. Bennett. In its substance, it is a corollary to Engel’s law and tells us that “the staple starchy ratio” is inversely related to household income (Grigg, 1996). Alternatively, the law enunciates that the proportion of calorie intake from the basic starchy staples falls as income rises since there is a diversification of diets with growing
income. It is because there is a universal desire for food variety and sources of high quality protein with increase in income by which the food basket of the rich contains more of the foods with high real price per calories. This law is very useful in analysing the diet pattern and changes in it over a period of time among different income strata in tune with income growth.

2.3.1.3 Veblen’s Theory of Conspicuous Consumption

In his much celebrated article “Leisure class” Veblen (1899) enunciated an explanatory theory of the utility of commodities that attempt to account for the formation and change of consumer preference over time (Basmann, et al., 1988). The basic idea of Veblen’s preposition is that rich people often consume highly conspicuous goods and services in order to exhibit their wealth, thereby achieving greater social status. Veblen effect exists when consumers exhibit a willingness to pay a higher price for functionally equivalent good. Empirical evidences show that Veblen effect is said to exist in the case of luxury goods. Conspicuous consumption is also found in the case of branded food items since brands are considered as having superior quality. However, in many cases these brands are not superior to the non-branded and are simply of identical quality but sold at a higher price (Bagwell and Bernhiem, 1996). In the present study, this perspective is used to analyse the trend of conspicuous consumption that are found among the upper income strata.

2.3.1.4 The Revealed Preference Theory (RPT)

The utility analyses up to 1930s were based on some subjective factors, such as satisfaction, the Marginal Rate of Substitution (MRS) and convexity of preferences. These factors are not objectively observable, and therefore can’t directly testable. Dissatisfied with the weak testability, Samuelson (1938) introduced the Revealed Preference Theory (RPT) where with some assumption one can observe consumer preferences; we can also thereby test consumer behaviour. The law posits that by comparing the expenditure on different combinations of goods in different relative price situations, one can infer as to whether a given collection of good is preferred to another collection, or, whether the typical consumer ‘reveals’ an unchanged scale of preference by the way he/she acts (Koo, 1963). The law tells us that people choose the best things
that they can afford. The product chosen is considered as the ‘the revealed preference’ of the customer in question (Varian, 2010).

The RPT can be used in analysing the purchase behaviour of food items also. It is the revealed preference theory that provides a framework commonly utilized in assessing consumer choice (Redman, 1979). RPT provides a formal base for food consumption analysis requiring interval or ordinal ranking of food items preferred. Consumers prefer the best food bundles that they can afford. This study traces its theoretical base in the Revealed preference axiom, that though there are alternative commodity bundles available at a cheaper rate, consumers reveal their preference in favour of branded food products if the same are affordable.

2.3.1.5 Lancastrian Commodity Demand Models

As against the notion that demand depends on price and utility, Lancaster (1966) introduced a novel approach. It is developed on the notion that “goods are what are thought of as goods” and against the backdrop of consumer’s reaction to new commodities and to quality variations. In Lancastrian approach, demand is defined over the level of characteristics provided by a given bundle of demanded products, rather than over the products themselves. A good as it does not provide utility, but the characteristics it possesses gives utility; a single commodity possesses more than one characteristic or attributes (Lancaster, 1966). There are differences among consumers in their preferences. Therefore, they choose different goods which are determined by the relative weight and attachment given to the various characteristics of each product. The characteristics approach to consumer theory is useful in analysing various aspects like; introduction of new goods and its impact on consumer demand, quality change and resultant change in demand and also in the estimation of the implicit or hedonic prices of a product in terms of its characteristics (Watson and Getz, 1981).

The present study is very well fit with Lancastrian commodity demand model. It is because in the case of urban dwellers, food choice decisions are often influenced by certain attributes like convenience, palatability and quality rather than price or income considerations. Basically, this model explains that it is the characteristics of food items that rouse their utility. There are different brands of the same food in the market with
different characteristics or attributes. Prices of these different brands can be estimated by hedonic or their implicit prices for the characteristics. Here there is ample opportunity for producers to bring out variety products and thus they can attract customers. In the food market, there are many producers making slight changes in their product in the form of variations in flavour, sweetness, shape and texture and thereby charging a premium for their products without incurring any extra cost in production.

2.3.1.6 Views of Rosen

The link between product prices and product characteristics or attributes was articulated by Rosen (1974) in a seminal paper. Rosen (1974) argued that consumers demand/purchase goods on the basis of utility generating attributes and on the basic characteristics of the product. The observed market price for food is an aggregate of the implicit prices for the constituent product characteristics. Therefore, price of a product not only provides cues about the inherent quality characteristics of the product but shows the value of inputs used in the production of goods.

2.3.1.7 Cue Utilization Theory

Cue utilization theory provides an analytical framework to assess and evaluate consumer’s perception with respect to quality of brands. The theory posits that products consist of an array of cues that act as a proxy of quality to purchasers. While assessing different products, consumers use the relevant and available information they have, particularly direct product characteristics or informational stimuli which are called cues. These cues are evoked according to their predictive and confidence values (Richardson, et al., 1994). The predictive value (PV) of a cue depends upon how the consumer attaches a given cue with product quality and confidence value (CV) depends on consumer’s ability to judge and use a cue accurately.

The cue utilization theory further classifies cues into extrinsic and intrinsic (Szybillo and Jacoby, 1974). Extrinsic cues are of product related attributes like brand name, price etc. but are not a part of the physical product. On the contrary intrinsic cues are product related attributes such as ingredients which are a part of the physical product. Consumers may use either or both cues depending on the strengths of PV and CV of that
particular consumer. In the present study this theory has relevance in the light of the fact that in the purchase behaviour of branded food products consumers are found to be influenced by both extrinsic and intrinsic cues depending upon the income strata to which they belong.

2.3.1.8 Views of Prais and Houthakker (1955)

Basically, quality elasticity is a measure used in estimating variations in price paid to a commodity by different households, provided there is no regional, seasonal or price discrimination. Variation in the price of a product among different households for the same quantity at a point of time implies that there is a difference in its quality. In the market space, difference in quality is mirrored by difference in price. Usually a product with high quality will be costlier when compared with a product with inferior quality. The concept of quality in food products emanates from the fact that food products are heterogeneous at varying degree of quality, taste, processing and convenience. The consumer decides their quality/product depending on the level of income. Since the level of income varies from person to person, the quality of items consumed may also vary. It means that those with a high standard of living or income may choose goods with high quality. It is a moving phenomenon, because with the standard of living of other people increasing they will also follow the same suit. Thus the ordinary expenditure elasticity for heterogeneous commodities derived from family budget data (quantity elasticity) will be different from the quality elasticity (Theil, 1965). Prais and Houthakker (1955) have put forward a formula to estimate quality elasticity, i.e.

\[
\frac{X}{Y_i} \cdot \frac{\delta Y_i}{\delta X} = \frac{X}{Q_i} \cdot \frac{\delta Q_i}{\delta X} + \frac{X}{P_i} \cdot \frac{\delta P_i}{\delta X} \quad i=1,2 \ldots n
\]

Where 'X' denotes total expenditure 'Yi' is the expenditure of the 'ith' commodity, 'Qi' is the quantity of the 'ith' commodity and 'Pi' is the price of the 'ith' commodity. The last term on the right hand side is a measure of quality elasticity. Here 'P' is not conventional price but the price of a product with superior quality.
Thus, there are various elasticity estimates, like expenditure elasticity, quality elasticity and quantity elasticity and all are of utmost importance in economic analysis and policy making. Quantity elasticity is useful in predicting future demand in physical units. Quality elasticity is useful in predicting future expenditure in money units on the commodity. However, quality elasticity in the present study is measured by a simple method envisaged by Iyengar (1963).

2.3.2 Theories on Consumer Perception and Behaviour

To better understand the importance of consumer’s perception of a brand, it is necessary to have an overview of consumer behaviour models related to marketing literature. Consumer behaviour is the process and activities people engage themselves in searching, selecting, purchasing, using, evaluating and disposing of product and services so as to satisfy their needs and desires (Belch and Belch, 2004). An overview of some important theories on consumer behaviour linked with the study is given in the present sub-section.

2.3.2.1 Means-end-chain Model and Consumer Behaviour

Means-end-chain model was developed by Gutman (1982). This model is capable of explaining the complexity and multidimensionality of the modern consumer behaviour where purchase decisions depend not only on prices and disposable income but also on other economic, social and cultural variables of consumer behaviour as latent or unobservable variables. Quality perception of the people is one of such variables which are observable in modern consumer market. In a broader sense, marketing literature divides consumer behaviour into two, cognitive and behavioural, though it is complementary to each other. Cognitive approach deals with mental structures, thinking process and physical action of the consumer in selecting and purchasing and using a product whereas behavioural approach deals with the direct link between the characteristics of the environment and behaviour (Zonali and Naspetti, 2002).
In the purchase decision of value added food products, there are different attributes, like taste, quality and convenience and their role in influencing different income groups varies. In this respect means-end-chain model is a versatile tool in garbing the actual purchase motives by eliciting the product attributes that are most relevant to the consumer by a detailed interview technique called laddering (Reynolds and Gutman, 1988).

### 2.3.2.2 Value Expectancy Theories

Food choice models have their origin in social psychological theories of decision making behaviour (Glanz and Eriksen, 1993). Value expectancy theory provides a good framework for the scientific appraisal of issues that a person confronts while taking a decision to take a specific action. Value expectancy theories in general deal with the influence of individual values and expectations on behaviour and/the development of these values and expectations. Values refer to the importance given to various life goals. Expectations refer to perceived likelihood of attaining these life goals. Both values and expectations have motivational properties that influence whether the behaviour in the direction of those is likely to occur or not (Glanz et al., 1998). Theories like Multi Attribute Utility Theory (MAUT), Theory of Reasoned Action (TRA) and theory of Planned Behaviour are all based on value expectancy theory and are all relevant to the theory of food selection.

### 2.3.2.3 Multi-Attribute Utility Theory (MAUT)

MAUT is one form of expectancy theory that can be used to analyze the factors that influence food selection (Glanz et al., 1998). MAUT is an evaluation scheme for evaluating products. MAUT enunciates that a product has a lot of inherent attributes; however, on the basis of evaluation process often a single attribute becomes prominent in its purchase decision (Winterfield and Edwards, 1986). A variety of factors influence a given behaviour and each has its own importance and weight. In the case of a particular food item, there are many factors to influence its selection like, cost, quality, taste, convenience, etc. On the basis of weight or importance given to various attributes, one attribute becomes prominent for a person and selection is done accordingly.
### 2.3.2.4 Theory of Reasoned Action (TRA)/Planned Behaviour (TPB)

Frustration with traditional attitude behaviour theory and its inability to find strong correlations between attitude measures and performance of volitional behaviour led to ushering in of TRA by Fishbein and Ajzen (1975). The aim of TRA is to explain volitional (voluntary) behaviours. The model has three components, viz. behavioural intention (BI), Attitude (A) and Subjective Norm (SN). TRA posits that a person’s behaviour intention depends on the person’s attitude to the behaviour and subjective norms (BI=A+SN). BI measures a person’s relative strength of intention to perform behaviour. Attitude (A) consists of beliefs about the consequences of performing the behaviour multiplied by his or her valuation of these consequences. SN is seen as a combination of perceived expectations from relevant individuals or groups along with intentions to comply with these expectations. The model tells us that a person’s behaviour is influenced by his own beliefs and influence of environment and other persons in his circle.

These three components (A, BI and SN) are useful in predicting the purchase behaviour of branded food products. Sometimes a person may think that branded food products are costly though they have quality, safety and convenience. These are beliefs and are denoted by the construct Attitude (A). Each of these beliefs can be weighted in the way that cost is more important than quality, convenience and safety. Persons in his circle may have an opinion that branded products provide quality, safety, convenience and also it is healthy too. These are Subjective Norms (SN). It is all beliefs of the people, weighted by the importance, one attribute to each of their opinions will influence his purchase intention as to whether he/she should purchase the branded products or not.

In order to widen the range of behaviours of TRA, it is Ajzen (1985) who proposed the Theory of Planned Behaviour (TPB). TRA predicts the volitional behaviour but TPB predicts and explains behaviours that were not completely under the volitional control of the actor by adding one more construct called Perceived Behavioral Control (PBC) to overcome certain constraints on action in TRA. According to TPB, human action is influenced by three major factors, a favourable or unfavourable evaluation of the behaviour (attitudes towards the behaviour), perceived social pressure to perform or
not to perform the behaviour (SN) and perceived capability to perform the behaviour (PBC). The greater the PBC, the stronger should an individual’s intention be to perform the behaviour under consideration (Ozer and Yilmaz, 2011).

Food choice behaviour can be explained by the TPB. Here, it is assumed that many of the influences on food choices are likely to be mediated by the beliefs and attitudes of individuals. Various factors like marketing, economic, cultural religious and demographic factors may act through the belief and attitudes of individual consumer behaviour (Shepherd, 1999). Therefore, attitude and belief held by an individual influences his food selection.

2.3.2.5 Consumat Approach of Jager (2000)

Many behavioural theories like theories on human needs, motivational process, social learning theory and TRA explain only some parts of the process that determine consumer behaviour since it excludes social psychology from the analysis (Vindigni, et al., 2002). It arouses an interest among scholars for a meta-theory of human behaviour which incorporates social psychology also into analysis. The multi-theoretical framework provided by Jager (2000) named by Consumat Approach is a milestone towards this end (Jager et al., 2000). The approach posits that, in the mainstream economics, human behaviour is controlled by rationality. In real life, human behaviour is shaped by multidimensional optimization.

The level of need satisfaction depends upon the satisfaction of different needs and the degree of uncertainty. There are some cognitive processes which determine the choice for consumption. Consumers with a low level of need satisfaction and low degree of uncertainty became ‘deliberate’. They will make an assessment of all possible consequences of all possible decisions. Consumers with a low need satisfaction and high degree of uncertainty will engage in ‘social comparison’ in such a way that they compare their own previous behaviour with the behaviour of the peer before making decisions. Consumers with a high level of need satisfaction and high level uncertainty will engage in ‘imitation’ with the behaviour of the peer. Repeat behaviour is found in those consumers with a high level of need satisfaction and low level of uncertainty (Vindigni et al., 2002). The Consumat approach is useful in analysing and predicting the
purchase behaviour certain food products, especially branded food products, and the brand loyalty (repeat buying) that are found among some segments of population.

2.3.3 Food Choice Models

Food choice has become a more complex process with rapid urbanization and with the lifestyle changes. It is because, in the past, all required foods were purchased from grocery shops, prepared and consumed at home. With rapid urbanisation and with the increased entry of women in workforce, the value of time has increased, people became busier. Convenience has become a more influencing factor in food selection than price. Food is now differentiated by an array of diverse options in terms of time, venue of its purchase, preparation and actual consumption.

The concept of food consumption models was first elaborated by the French school headed by Malassis (Fonte, 2002). It was the first successful attempt that integrated economic, social and cultural perspectives in the analysis of food consumption. Malassis defines food system as a set of interdependent elements that work together towards the end of satisfying food needs of a given population in a given space and time (See appendix Table A6).

Since food is the first and foremost requirement and also it comes in infinite variety, food choices are a major constituent of all purchase decisions (Grunert, 1997). Since food choice is like any complex human behaviour, various models have been developed to sketch the way in which people construct the process of choosing food. There are some simple models which covers some essential aspects of food choices, like Shepherd (1985) model and model developed by Wadolowska et al., (2008). There are some comprehensive models which cover all essential variables that influence food choices like Zeithml (1988), Furst et al.(1996), Steenkamp (1997),Verbeke (2000), Grunert( 2005). However, only the last model is described in detail. It is justified on the ground that it is comprehensive and covers all aspects related to food choice.
2.3.3.1 The Total Food Quality Model (TFQM) (Grunert 2005)

The Total Food Quality model was originally proposed by Grunert, Larsen, Madsen, and Baadsgaard (1996). This model integrates various approaches that are used in analyzing consumer quality perception and decision making like Means-end-chain theory, Multi-Attribute Utility theory, Theory of Reasoned Action and Planned Behaviour.

TFQM was developed for the perception and evaluation of food quality. Grunert’s TFQM has two dimensions, viz. vertical and horizontal. The horizontal is a time dimension which shows pre and post-purchase quality perceptions. The vertical dimension deals with inference making (Grunert et al., 2005). Grunert explains consumer’s quality evaluation process of food in pre and post purchase perspectives and it also shows how the process determines intentions to buy and future purchases (Fig.2.1). It is because food products are mainly experienced products (Marreiros and Ness, 2009). In the case of food, consumers will develop quality expectation but it is only after consumption that a consumer can ensure whether their expected quality is fulfilled or not. The pre-purchase component of the model shows how the quality expectations are formed with the available quality cues. The intrinsic cues are objectively available in the form of technical specification and extrinsic quality cues represent all other features like brand name, price and packaging, on the basis of which consumer can take a purchase decision. If the expected quality is available with purchased items they may purchase the product repeatedly.

TFQ is useful in analysing the phenomenon of repeat buying of branded food products among certain segments of population and also to recognize the important attributes in preferring branded /processed food products.
The analytical framework for the present study (given in Chapter 5) is constructed by borrowing the essential aspects of various models including MAUT, TRA and TFQM of Grunert. This sub-section reviewed some of the important theories, models and approaches which have a close linkage with the present study.
2.4 Kerala – A Brief Profile

The present sub-section provides a brief profile of the study area.

The State of Kerala was formed on 1st November 1956. It is located in the southwestern India. Kerala is India’s most advanced society in terms of education, literacy and health. As per Census 2011 figures, Kerala is native home for 3,33,87,677 persons of which 1,60,21,290 (48 per cent) are males and 1,73,66,387(52 per cent) are females with a sex ratio of 1084. Density of population is 859/sq km. For administrative purpose the State of Kerala has been divided into 14 districts. The urban sector of Kerala comprises five Municipal Corporations and 60 Municipalities. As per census 2011, 47.7 per cent of the total population of Kerala is living in urban areas, compared to 25.97 per cent in 2001. The urban population has registered an increase of 92.72 per cent during the decade 2001-2011 (See appendix Table A7). As per Census 2011, 93.91 per cent of the population is literate. Literacy among male is 96.02 per cent where as it amounts to 91.98 per cent among females.

Kerala is found to be a variant of other States in India in terms of socio-economic indicators like literacy, poverty, infant mortality, birth rate, death rate and degree of urbanization. Kerala’s development experience has attracted worldwide attention that with a low per capita income, Kerala has managed to get a Human Development Index (HDI) which is even comparable to some of the advanced economies of the world. In the realm of consumption expenditure, Kerala ranks first among the major States of India in respect of rural MPCE and in the case of urban standing at the second position (GOI, 2011). In respect of life style changes, another important determinant of urban consumption pattern, most urban people of Kerala rely on construction and service sector for their livelihood, with a sizable proportion of women who are employed in economic activities outside home.
2.4.1 A Brief Profile-Thiruvananthapuram Municipal Corporation

Thiruvananthapuram (Trivandrum) municipality came into existence in the year 1920 and was upgraded into a corporation on 30th October, 1940. At present it is the largest city corporation in the State, by area and population and also it is the capital city of Kerala. The city corporation has an area of 214.86 sq.km with 100 administrative wards (GOK, 2011). As per Census 2011, the total population of the city (without outgrowth) is 7,52,490 of which 3,64,657 (48 per cent) are males and 3,87,833 (52 per cent) are females. Average literacy rate is 93.72 per cent, while literacy among male is 94.94 per cent and among females it is 92.58 per cent. Sex ratio of the city is 1064. Density of population is 5284 persons/sq km.

2.4.2 A Brief Profile-Kochi Municipal Corporation

The Corporation of Kochi (Cochin) was formed on 1st November 1967. It is the second largest city corporation in Kerala in population. However, it is the most densely populated city of Kerala (6340/sq km). Kochi is popularly known as the commercial capital of Kerala (GOK, 2011). The city corporation is spread over 94.88 sq.km with 74 administrative wards. As per Census 2011, the total population of the city (without outgrowth) is 6,01,574 of which 2,96,668 (49 per cent) are males 3,04,906 (51 per cent) are females. The average literacy rate is 97.49 per cent, 98.31 per cent of the males and 96.69 per cent of the females are literates. Sex ratio of the city is 1028.

2.4.3 A Brief Profile-Kozhikode Municipal Corporation

The Kozhikode (Calicut) municipal corporation was formed in the year 1962. Kozhikode is the third largest city in Kerala. It has 75 administrative wards spread over 118.58 sq/km area (GOK, 2011). As per census 2011, the total population of the city (without outgrowth) is 4,32,097 of which 2,06,494 (48 per cent) are males 2,25,603 (52 per cent) are females. The average literacy rate is 96.8 per cent, while literacy among males is 97.93 per cent and among females it is 95.78 per cent. Sex ratio is 915 and density of population of the city is 3400/sq km.
2.5 Conclusion

The present chapter presents a review of important theoretical and empirical literature which has a close linkage with the present study. Here, section 2.2 reviewed some important studies on food consumption pattern, shift in it, the use pattern and underlying reasons for preferring processed and branded food products in a regional, national and international perspective. The research gap for the present study is also identified. Appropriate theoretical space for the present study is located in section 2.3. A brief profile of the study area is also given in the last sub-section.