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A STUDY ON ECONOMIC BEHAVIOUR, PERCEPTION AND ATTITUDE OF HOUSEHOLDS TOWARDS TRADITIONAL AND MODERN FOOD RETAILING FORMATS IN KOCHI

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Changes in tastes, preferences, lifestyle and changing diet pattern due to rising affluent population are prime factors responsible for emergence of modern retail in India. Primary survey on various socio-economic parameters from 120 randomly selected households in Kochi was conducted. Logit model, conjoint analysis and descriptive statistics were used to infer the results. The family income and distance to the nearest modern retail were found to influence the consumers' decision to purchase from modern retails. The high part-worth value for price (less than traditional retails) points to the importance of price competition to attract consumers. Consumers are willing to compromise on quality for the sake of lower price. Factor importance value of modern retail emphasized the need to devise a sale strategy containing two essential ingredients viz. less price than traditional retail and easiness to approach (less than 1 km) to sustain in competitive race of agri-retail business in Kochi.

***Keywords**: Modern retail, traditional retail, consumer preference, logit model, conjoint analysis.*

INTRODUCTION

The new liberalized policy regime has encouraged the growth and penetration of the modern retail in retail sector of the economy. The affluence of the Indian people is increasing along with the increase in population. These affluent consumers are driving changes in food consumption patterns. With higher purchasing power especially in urban areas, consumers are also becoming more discriminating, demanding more specific quality and safety attributes in their food, as well as in the sources of those foods (Humphrey 2005, King and Venturini, 2005, Reardon et al. 2001, Regmi and Gelhar 2005). The growth of modern food retail is slowly picking up according to the changing nature of food demand. This virtually restructures the food retail sector resulting in the dominance of the modern food retail and the contraction of the traditional food retail sector (Reardon and Gulati 2008, Coyle 2006). The ongoing restructuring of the food retail markets is driven by a set of factors, namely: income growth with increasing urbanization, changing consumer preferences, changing consumer eating habits, increased infrastructure development, low margins and high competition, demographic, cultural, and social changes; and increased

travel (Chen et al. 2005). Moore (1989) also revealed that the major consumer-driven dynamics of retail restructuring has been led by the more affluent group of consumers and their tastes are also becoming more diverse. Despite all these drives for modernity, there exist some consumers, at all income levels, who still prefer to shop at open-air markets where they expect to find higher quality fresh fruits and vegetables. Traditional retailers are also, in general, still found to be cheaper compared with modern outlets like supermarkets (Minten and Reardon 2008, Coyle 2006). Also traditional tastes and preferences still prevail.

The impact of this growth will be the emergence of high competition among different retailing formats. This competition will also make it necessary for the retailers to understand the consumer shopping behavior, as well as the perception and attitude of customers towards different retailing formats, so that they can emerge as winner in the race. Alba et.al. (2004), through complementary experimental research, showed that consumers are indeed able to distinguish between different retail formats and form stable impressions about them. Individual determinants such as shopping intention, attitude towards retail outlets and shopping habit play important role on consumer shopping decision as revealed in consumer shopping behaviour in different retailing formats (Siringoringo and Kowanda 2006). Sanjeev, (2007) studied the new entrants in the organized retail market and found that the pressure is forcing retailers to work out strategies that will help them emerge unscathed from the upcoming cut-throat competition. This interplay of actors and factors in intense competitive environment in retailing business has greatly affected the patronage behavior of consumers. Moreover, consumers visit all formats of retails in order to make convenience goods purchase.

Understanding factors affecting consumer preferences for retail store selection can assist retailers in developing appropriate marketing strategies towards meeting the needs and wants of consumers and to concentrate on strategies in building consumers' positive attitude towards their retail, so that they visit their retail outlets in order to make purchases regularly. This paper is an attempt to examine the linkage between consumer preferences and the importance of some salient store attributes and strategic implications of such preferences. In this backdrop, it becomes essential to analyze the factors determining the access of consumers to the modern retail and outlet choice decision-making of households. The knowledge emanating from the study would help the businessmen, planners and policy makers to understand the preferences and driving forces behind different retailing formats' choices which would be crucial for designing effective business strategy and policies for Indian consumers who rely on traditional retail.

METHODOLOGY

This study is confined to Kochi which is the economic capital of Kerala. Several

players are active in the retailing of food in Kochi. They include the traditional informal sector and the modern retail. Wet-market traders, pushcarts as well as kirana (Mom and Pop) stores combine to form the traditional informal sector. The modern retail outlets include the hypermarkets (8000 sq. ft. and more), large supermarkets (3500-5000 sq. ft.), mini supermarkets (1000-2000 sq. ft.), convenience stores (750-1000sq. ft.), and discount /shopping list grocers. Six selected food items-representing key staple processed foods (rice and coconut oil) and the most common fruits (banana and apple) and vegetables (onion and potato) were selected. We employed a choice experiment approach to evaluate consumers' preferences for the various attributes of retail formats. In a choice experiment, individuals are given a hypothetical setting, and then asked to choose their preferred alternative (usually repeatedly) from several alternatives in a choice set. Each alternative is described by a number of attributes that take on different levels. The modern retail attributes and levels used in the choice experiment include easiness to approach, price level, and quality of the produce offered for each retail format. A full description of the attributes and the levels of each attribute are presented in Table 1.

It was expected that the attributes viz. easiness to approach, price level, and quality of the produce, would play a distinct role in governing consumer households' preferences for different retail formats in designing appropriate incentive-based policies for alluring and retaining customers.

Purposive stratified random sampling technique was used for the selection of respondents for this study. Firstly, Kochi city, the economic capital of Kerala, was selected purposively for this study on account of relatively faster penetration and expansion of modern retail outlets. Secondly, the city was divided into three strata namely high, medium and low circle rates based on circle rate of real estate. There were two types of business formats operating in the city namely, modern and traditional retail formats. Since the modern outlets are limited in numbers, we have selected all 30 modern retail outlets falling 8 in high, 12 in medium and 10 in low circle rate zones. Further, two households were selected randomly from each modern outlets. A total number of 60 households were interviewed from the modern retail

Table 1

Attributes of modern retails selected for conjoint analysis along with levels

Factor	Levels	
Easiness to approach	Less than1 km	More than 1 km
Price level	lower than traditional retails	More than traditional retails
Quality of the produce offered	Excellent	Fair

format. For the selection of respondents from traditional retail format, no formal information was available on the population of traditional retail outlets in all the three zones. Therefore, the local information on concentration of outlets were used and probability proportional sampling method was followed to select 8, 12 and 10 outlets from high, medium and low circle rate zones, respectively. Three kirana, 2 wet market and 3 pushcarts traders from high income zone; 5 kirana, 2 wet market and 5 pushcarts traders from medium zone; and 4 kirana, 2 wet market and 4 pushcarts traders from low zone were selected using proportion probability sampling method. Further, 2 randomly selected respondents were interviewed from each selected outlet prevailing in the study area. Thus, a total sample size 120 respondents were interviewed comprising of 60 respondents from modern retail and 60 respondents from traditional retail. The study is based on the primary data collected from consumers regarding the perception and preference of different retail formats, facilities that they expect from modern retails, number of earning members, family income etc. using structured schedule pertaining to the survey period December 2010 to January 2011.The consumers surveyed included high income, middle income and poor income groups. Consumers were asked to rank different combinations of three levels of the selected attributes that modern retails can offer, by using cards. This was done for the purpose of doing conjoint analysis to identify the combination of levels of attributes consumers prefer the most.

Logistic Regression

The factors determining the consumers' access to the modern retail were studied using the logit model. The consumers who had access to modern retails were assigned value 1; where as those consumers who didn't have access to the modern retails were assigned value 0. The probability P for a consumer to approach value 1 is increasing at a slower and slower rate as the independent variables increase or decrease. Similarly the probability that the consumer reaches a value 0 increases at a slower and slower rate as the independent variables decrease or increase. The model is as follows

$Y = g(X_i)$

Y = 1, if the consumer had access to modern retails

Y = 0, if the consumer didn't have access to modern retails

$$g(X_i) = \frac{e^{\beta_0+\Sigma_{i=1}\beta_i X_i}}{1+e^{\beta_0+\Sigma_{i=1}\beta_i X_i}}$$

Where

β_0 = intercept

β_i = parameter values

X_1 = family income of the consumer (Rs 1000)

X_2 = number of earning members in the family

X_3 = educational status of the consumer (years)

X_4 = distance to the nearest modern retail (meters)

CONJOINT ANALYSIS

Conjoint analysis was used to understand consumer preferences that share a theoretical foundation based on the models of information integration and functional measurement. It was helpful in understanding consumers' reactions to and evaluations of predetermined attribute combinations that represent potential features or services offered by modern retails. Three important identified attributes that constitutes the utility of modern retails were easiness to approach, price level and quality of the produce. Each of these attributes was assigned two levels. The attributes selected along with levels are shown in the Table 1.

Considering all the attributes and levels, 8 stimuli were formed (for 3 attributes with two levels, 2x2x2= 8 combinations can be formed). The Table 2 shows the stimuli descriptions. These stimuli were given to 120 consumers, selected in random, as 8 cards and they were asked to rank each stimulus. The scale of ranking was from 1 to 8, 1 for the most preferred stimulus and 8 for the least preferred stimulus. Then part-worth or utility of each level of different factors, and the relative importance of each factor were found out using a random utility framework (McFadden 1974).

RESULTS AND DISCUSSION

Consumers' Access to Modern Retails

Access of consumers to different business formats depends on the combined effect of the profile of consumers

Table 2

Stimuli Descriptions

Stimulus	Levels of		
	Easiness to approach	**Price level**	**Quality**
1	Less than 1 km	Less than traditional retails	Excellent
2	Less than 1 km	Less than traditional retails	Fair
3	Less than 1 km	More than traditional retails	Excellent
4	Less than 1 km	More than traditional retails	Fair
5	More than 1 km	Less than traditional retails	Excellent
6	More than 1 km	Less than traditional retails	Fair
7	More than 1 km	More than traditional retails	Excellent
8	More than 1 km	More than traditional retails	Fair

Source: Developed by author

shopping, the pricing practices, and type and quality of food available on the shelf of modern retails in study area. The results of the logistic regression presented in Table 3. From the model summary, -2 log likelihood was 26.476 which indicates that the model is of good fit because higher the value of -2 log likelihood, better the model fit. The coefficient value for family income was 0.610 and found statistically significant at 1 % level. It could be inferred that family income of the consumer was positively affecting the consumer's access to the modern retail. The probability i.e. Exp(β) for the family income was 1.84, which suggested that due to Rs 1000 increase in a consumer's family income,his probability to purchase from modern retail will be 0.84 (1.841-1=0.84, since the family income parameter is having positive sign). Minten (2008) concluded that income was a significant determinant of demand for quality food. Henceforth, profit-maximizing modern retail seems to prefer a pricing strategy in line with the price-inelastic demand of a middle class interested in one-stop shopping and a clean shopping environment. The affluent family forcing the restructuring of the food retail sector is only a single side of the coin. Although the factors viz. number of earning members and educational status were found statistically insignificant but negatively affecting the consumer's decision to purchase from modern retails. Moreover, the coefficient value of the distance to the nearest modern retail in the model was -0.004 and found statistically significant at 5 % level. The Exp(β) value for distance to the nearest modern retail was got as 0.99, which indicates that, due to unit(1 m) increase in distance, the probability for a consumer not to purchase from modern retail will be 0.01(1- 0.99= 0.01, since the distance parameter is having negative sign). Easiness to approach the modern retail in today's busy life decides the chances for the consumer to buy from modern retail formats. Minten and Reardon (2008) concluded that despite the rising income drive for modernity, there existed some consumers, at all income levels, who still preferred to shop at open-air markets where they expected to find higher quality fresh fruits and vegetables. Also traditional tastes and preferences still prevail. Hence traditional retailers were also, in general, still found to be cheaper compare with modern outlets like supermarkets.

Perception and Attitude of Consumers towards Modern Retail

Three conspicuous attributes of varying business formats in food retail sector in Kochi were considered for computing the utility of various stimuli and ascertaining the factor importance from consumers' standpoints. The results of the conjoint analysis are presented in the Tables 4 and 5. The stimulus 1 with combination of three attributes (viz. distance <1 km, price < traditional retails, excellent quality) in Table 4 imparts the highest utility (2.75) to the consumers. Contrary to this, the stimulus 8 with combination of three attributes (viz. distance>1km, price> traditional retails,

Table 3

Logistic regression of factors determining consumers' access to the modern retails in Kochi

Variables	Coefficients	Standard error	Exp(β)	Significance
Intercept	-3.819	5.316	0.222	0.472
Family income	0.610	0.212	1.841	0.004
No. of earning members	-1.590	1.617	0.204	0.325
Educational status	-0.437	0.342	0.646	0.201
Distance to the nearest modern retail	-0.004	0.002	0.996	0.019

-2 log likelihood 26.476

fair quality) imparts the least utility (-2.75) to the consumers. The utilities provided by all other stimuli lay in between these two extremes. Consumer households' with higher income would prefer that retail format that offered them an excellent quality at lower price than traditional retail and must be within a kilometre distance from his residence. Design of appropriate business strategies and policies requires an understanding of consumer incentives and constraints when they make their choice of retail formats.

While observing the individual levels, it was found that, price less than traditional retail was the level with highest part-worth value (1.029). The consumers were willing to compromise with quality to a certain extent as evident from the comparatively less part-worth value of excellent quality (0.726). This reinforces the fact that the consumers in Kochi are highly price sensitive. Kerala is mainly a consumerist state and the middle income group contributes the major share of the consumers there. Kochi is not an exception to this. The middle class consumers' purchasing decision was found to be influenced mostly by the prices of goods. Convenience to purchase, represented by < 1km distance to the nearest modern retail was also found to be more important, than quality, from consumers' point of view. The part-worth value (0.995) computed for this level was higher than that of part-worth value (0.726) of the excellent quality of the product offered to customers. Easiness to approach the modern retail in today's busy life decides the chances for the consumer to buy from modern retail formats. The consumers in Kochi were not following the practice of driving for long distances, once in a week, and shopping all the commodities they require. In fact they show the tendency to purchase daily or once in two days for the freshness factor. This purchasing behaviour further results in looking for the most convenient retail outlet in terms of less distance. This provides insight to owners of the modern retails how to allure customers in Kochi by providing a certain combination of less prices and less distance. Simply, the modern retails have bleak chance to flourish retail food business in Kochi, if they are not able to compete with the price levels of traditional retails.

Table 4

Stimuli Arranged in Descending Order of Utilities

Stimulus	Levels of			Utility of each stimulus
	Easiness to approach	Price level	Quality	
1	Less than 1 km	Less than traditional retails	Excellent	2.75
2	Less than 1 km	Less than traditional retails	Fair	1.298
5	More than 1 km	Less than traditional retails	Excellent	0.76
3	Less than 1 km	More than traditional retails	Excellent	0.692
6	More than 1 km	Less than traditional retails	Fair	-0.692
4	Less than 1 km	More than traditional retails	Fair	-0.76
7	More than 1 km	More than traditional retails	Excellent	-1.298
8	More than 1 km	More than traditional retails	Fair	-2.75

The part-worth value calculated for this level (0.995) was higher than that of the excellent quality part-worth. The table 5 also shows the factor importance expressed in percentage terms. The easiness to approach and price level were found to have almost the same important, where as the quality attribute has relatively less importance from the consumers' standpoint. When the factor importance for both attributes; viz. easiness to approach, and price levels, were 36.5 and 36.2 percent respectively, quality of the produce offered to consumer households attained factor importance of 27.22 percent.

CONCLUSION

The affluence of Indians in increasing population is driving changes in food consumption pattern. Consumers are becoming more discriminating, demanding more specific quality and safety attributes in the food commodities. This vacuum was filled up with the

Table 5

Factor Importance of Each Attribute and Average Part-Worth of Each Level

Attributes	Levels per attribute	Aggregate part-worth	Range of part-worths	Factor importance (%)	Average part-worth
Easiness to approach	< 1 km	59.705	120.55	36.52	0.995
	> 1 km	-59.705			-0.995
Price level	< traditional retails	61.714	119.51	36.20	1.029
	> traditional retails	-61.714			-1.029
Quality	Excellent	43.570	89.84	27.22	0.726
	Fair	-43.570			-0.726

emergence of modern food retailers and created more competition with their counterparts. Increase in family income (Rs 1000) of the consumer would increase the probability (0.84) to purchase from modern retail. Modern retail seems to prefer a pricing strategy in line with the price-inelastic demand of a middle class interested in one-stop shopping environment. Distance to the nearest modern retail decides the chances for the consumer to buy from modern retail formats. If the easiness to approach the modern retail i.e. the distance increases than chances for the consumers to purchase from modern retail decreases and vice versa. Traditional tastes and preferences among consumers still prevail. There existed some consumers, irrespective of all income levels, still preferred to shop at open-air markets where they expected to find higher quality fresh fruits and vegetables. The retail format has offered to the consumers an excellent quality at lower price than traditional retail, and within a kilometre distance from their residence, became the most preferred option. Middle class consumers' purchasing decision was strongly influenced by prevailing prices, and the consumers showed willingness to compromise with quality to a certain extent. The factor importance of the attributes viz. easiness to approach, price levels, and quality, also corroborated the findings. Modern retailers have to devise a sale strategy containing essential ingredients viz. lesser price than traditional retailers, and easiness to approach modern retailers, to attract the consumers to buy their merchandise in this competitive agri-retail-business environment.

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