An Exploratory study of factors related to Consumer Behaviour towards purchase of Fruits and Vegetables from different Retail Formats

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Abstract -The purpose of this study is to identify the variant consumer behaviour aspects in purchasing of the perishable products especially like fruits and vegetables in context with Asian consumers keeping the main focus towards developing retail markets especially in Indian context. Different channels of retailing and their formats with Foreign Direct Investment will help the global retail giants to enter the markets by identifying diverse purchasing factors related to fruits and vegetables as it forms the staple product of consumption irrespective of the demographical, physiological, socio-economic variables across the countries or their individual states.

Keywords: Behaviour; fruits; vegetables; retail formats; Channels; consumers

1. INTRODUCTION

Consumers collectively make decisions every day on where, how, when and what to shop or buy the necessary and essential products which they consume daily. An Indian consumer spends more on food which is about 50 percent on an average of the total retail, which would be a lot higher for low income groups (Patibandla, 2012)[45]. The outcomes of these decisions are critical to every retailer’s performance for their growth and development whether internationally or nationally at ground level. Many efforts have been made by the consumers to ‘switch’ their food store shopping through their trip behaviors as suggested by Cummins et al (2008)[13]. As pointed out by Thøgersen and Ölander (2002)[64], traditional eating patterns are not characteristics of aware and affluent consumers. As a modern food consumer is concerned about the safety and quality of the food products which are purchased (Galvez-Nogales and Wall, 2005). Due to multiple branded products and related services are available in the market, this decision to purchase different food products will help in selecting these non-branded and branded products of their choice (Kuhar and Juvancic, 2012)[36]. So it could be identified that this study contributes to the knowledge in behaviour of consumers and retail formats towards fruits and vegetables in two ways:

1. To study the presence of the current retail formats especially with the purchase of the perishable product like fruits and vegetables through buying behaviour of the consumers and the factors affecting their buying decision described through a mixture of review.

2. It makes an attempt to identify and explore different factors or variables that are contributing to the study of fruits & vegetables for its growth and continuation of different retail formats with their effect on consumers buying.

New entrants have been incepted in the Indian markets the factors of purchasing have also taken a initial change in selecting their products, these factors may include geographic, psychological – social, demographical and technological (Umeh and Sharps, 2012; Stolz et al, 2001; Gültekin et al, 2013[25]; Lianga and Limb, 2011[37]; Zhen and Mansori, 2012)[72]. There is a need to study these reviews because, in every situation, the need and desires of the individual will transform. According to the risk involved to make a purchase which is directly or indirectly affected by the feedback and re – purchase behaviour. All these attributes that are required to study are mainly originated from the learning theory which was suggested by Louden and Della Bitta (1993)[38]. The trademark of Indian retailing which are the small kirana shops with a high level of personalized service is making shoppers reluctant to depart from traditional ways of shopping. Along with, the modern consumers not only want food products to be of high quality, but also to meet health, safety and environmental attributes (Rezai et al, 2011[54]; Correia – Rubzen, 2012). Though growth have been noticed in the large modern retail sector, the bulk of retailing in India continues to happen via the small and traditional general trade store as described by
Chattopadhyay et al (2011)[7]. This category of the products falls in the category which has a very short lifespan in their life cycle with respect to time. The types of product that comes under the perishable category can be classified as:

- Fruits and Vegetables
- Dairy products
- Meat and Fish
- Sweets

Many authors have studied different factors to identify the purchasing of perishable products, which are (Ozguven, 2012[44]; Reddy et al, 2010 [53]; Webber et al, 2010[68]; Goethals et al, 2012)[18] it was very difficult to foresee in which the consumers the products due to their product life cycle, health values, usage, which has a crucial influence on all classes of consumers. So the study of fruits and vegetables category of the product, particularly in emerging country has been studied. In the context, to study the different behaviour of the day to day product of every individual making it essential and highly fragmented. Because they are geographically dislocated in our society in purchasing fruits and vegetables from various channels and markets.

2. GLOBAL MARKETS AND INDIA

As Oli (2005)[43] described in his research that fresh fruits and vegetables are considered as one of the key components for supermarkets are important as a strategic product in attracting customers to the stores. The fruit and vegetable segment has so far not attracted enough investments since organized retailers account for less than 1% of the total sales of fruits and vegetables in India reported by CRISIL (2010)[12]. It is necessary to identify the factors, attributes and variables that will determine the consumer buying behaviour of these products. Making it possible to study retail format (organized and unorganized), channel of purchase (online or offline), brands of fruits and vegetables in India. Diverse climate ensures availability of all varieties of fresh fruits and vegetables. Which makes them an essential part of the daily diet in India and they are in great demand round the year from most sections of the population (Gandhi and Namboodir, 2004)[17]. India ranks second in fruits and vegetables production in the world, after China. As per National Horticulture Database (2012) published by National Horticulture Board, during 2011-12 India produced 76.424 million metric tons of fruits and 156.33 million metric tons of vegetables. The area under cultivation of fruits stood at 6.704 million hectares while vegetables were cultivated at 8.99 million hectares.

![World Production of Vegetables](image)

Figure 1: World Vegetables production of Different Countries Source: Indian Horticulture Database, 2011

India is the largest producer of ginger and okra. Amongst vegetables, it ranks second in production of Cauliflowers, Brinjal, Cabbage, Cauliflower, Okra, Onion, Peas, Potato and Tomato. Amongst fruits, the country ranks first in production of Bananas (27.85%), Papayas (35.31%), and Mangoes (including mangos teens and guavas) (39.04%).

The vast production base offers India tremendous opportunities for export. During 2012-13, India exported fruits and vegetables worth Rs.5730.85 Crores which comprised of fruits worth Rs. 2467.40 Crores and vegetables worth Rs. 3263.45 Crores.
3. REVIEW OF LITERATURE

3.1 Retail Choice Preference
The fruits and vegetables sector is mainly conquered by the local vendors, mandis, cart vendors, street hawkers, mom and pop stores (kirana stores), etc forming the unorganized retailers in India due to the proximity (Sharkey and Horel, 2009)[59]. The consumer perceives that the local vendors (unorganized) have more fresh products, reasonable price and availability (Treiman et al, 1996; Sara et al, 2004). The most notable trend among all retail sectors can be seen in the food and grocery business. Traditionally grocery purchases were limited to the neighbourhood general store which is typified by the counter service format, easy credit terms, limited variety and personal service. These factors have unlimited the consumers willing to look beyond the traditional way of purchasing fruits and vegetables in Indian markets. It was identified by Patibandla (2012)[45] that kirana stores and vegetable and fruit vendors observed that their business dropped by 20% with the advent of the Reliance fresh stores within the measurable radius. Sales through supermarkets and department stores are small compared with overall retail sales. As observed by Zanoli et al (2004)[71] consumers who consume less and not obsessed to prefer supermarket, while regular shoppers prefer organic food store. Solgaard and Hansen (2003)[61] identified several store attributes that were considered important for the consumer's evaluation of stores.

3.2 Types of Retail Consumers
As the different consumers have diverse demand in terms of their usage and consumption pattern (Nijmeijer et al, 2004)[41] they prefer different channel to purchase these fruits and vegetables shown in Fig 3. With the help of different variables of consumer buying behaviour, the selection of channel for their daily purchase activities can be identified. Also the need of the institutional clients is very different as they mainly focus on the quantity and price. The product and its availability in a particular season is major factor for these giant patrons. As for these large organized consumers, they need to maintain both on and off seasonal products to satisfy the retail consumers who approaches these institutional clients. Many different consumers have different perception since the different store formats have also very different characteristics (e.g. price level and number of products). It is likely that also the consumers’ buying behaviour differs between different stores so they decide on the planned behaviour concept which was given by Tarkiainen and Sundqvist (2005)[63]. It was evaluated by Theory of Planned Behaviour (TPB) to study the intension and perception towards purchase of organic foods.

Figure 2: Fruits producing Countries across World Source: Indian Horticulture Database, 2011

[Image: Total Production of Fruits by Country Wise]
3.3 Demographical factors and their influence

The agricultural sector especially, fruit and vegetable in India are very unidirectional sector in the type of purchase (Izzah, et al, 2012) and channel selection (Vannoppenet al, 2002[66]; Kuhar and Juvcanc, 2010)[36]. This sector is affected by the distance travelled to buy or purchase the products which depends on the consumers and their preference towards the local retailers which falls to their neighbourhood. The consumers have a perception that area, location are selected and distinguished by variety, freshness (Cardello and Schutz, 2003)[6], fragrance, type of lifestyle (Ping Qing et al, 2012). Physical touch to the product is the key element to purchase the products. According to the buying behaviour it may change or alter due to the non-availability of the fruits and vegetables from different channels. Among the demographical factors, gender (Zhen and Mansori, 2012)[72] especially women, are more focused on purchasing of fruits and vegetables with diverse religion (Goswami and Mishra, 2009)[21] and ethnicity (Nurul et al, 2012)[42].

3.4 Educational factors and its effect

Also the education level (Brown, 2003)[5] plays a fundamental role to select the type of channel they select. In recent years, due to change in the education qualification, consumers are in a psychological state which gives a change towards different alternatives retail channels. International products and brands are available in these retail formats. Fruits and vegetables are considered as the essential and consumers associate healthy values (Ahmad and Juhdi, 2010)[1], Shafiea and Rennieb, 2012)[58]. Especially to the rural India which are completely dependent on the buying of fruits and vegetables preferably on a comparative and a reasonable price. The rural population of the country has rarely heard about the organized retail format and other new channel of purchase. Similarly, rural customers are very reluctant towards online purchase which is very dominant in the urban demography. With the variables like income, younger people, time saving (Morganosky and Cude, 2000)[39] are considered important as the household members in the urban and metro cities of the country due to hectic schedule. This makes impossible going physically to purchase of fruits and vegetables, making it difficult to measure the actual behaviour.

3.5 Online Retail formats and Influencing factors

In this age of digitization, there lies a challenge to predict the consumer behaviour as the new channel of purchasing has already been accepted in sector like groceries, fast moving consumer goods (beauty care, shoes), consumer durables, books, and many more. Also the internet and social media has helped these products to be accepted globally and have a wide customer base. So it will be interesting to analyze whether these channel can also be effective in fruits and vegetables markets in India. The major concern about this channel is that, it does not provide the physical touch properties to these perishable products like fruits and vegetables. As India is a diverse country there are many sections in the same society who perceives the usage and convenience of online channel to purchase (Zameer and Mukherjee, 2011)[70] of fruits and vegetables in a different medium. So to measuring actual behaviour, with the help of a technology-based environment, which track and observe the actual movement or determines the actual usage and consumption in terms of behaviour which was identified by (Grewal and Levy, 2007)[23]. It would be good for consumers to order fruits and vegetables online and then would happy to get their home delivery (Goethals et al, 2012) of products.

3.6 Branding of Fruits and Vegetables with retail formats

In present days, brands not only represent the name or symbol of the company that produce products or provide services. Nowadays consumers are so genuinely connected to brands that when they purchase any product or service, branding often influence their final choice (Rubini, 2010)[56]. Branded products are slowly emerging as tough competitors in the domestic market irrespective of the quantity of fruits and vegetables consumers consumes each day. The most important aspects that consumer believes which makes a strong brand are quality, brand logo, health related messages and effective packaging and preservation of the products. Hence, the nutritional value should be increased during purchase and consumption. As of now these products are unbranded and unlabeled, so consumers had to judge their quality, freshness at the time of purchase through evaluation on the appearance and the visibility of the product (Grunert et al, 2004)[24]. Stores in the rural areas generally offer at least one brand of generic food for each type of highly recognizable brand name offered (Hendrickson et al, 2006)[27]. Branding of fruits and vegetables can be classified on the following type of the retailers that are operated in Indian market as drafted in figure 4 which classifies the different retail formats and the consumers that are associated with them.
Retailers contribute to constructing brand architectures by listing certain manufacturer brands or by designing new brands of their own along with their individual interpretations and meanings to make appropriate purchasing decisions (Lars Esbjerg, TinoBech-Larsen, 2009). One of the risk strategies is to trust a well-known brand on which consumers place high brand equity. Thus, high brand equity may lead to reduce the perceived risk of consumers towards a particular product or service (Warnakulasooriya and Perera, 2011). Branding is associated with perceived risk in selecting the brand from multiple factors play an important role in order to explain phenomena such as information seeking, brand loyalty, opinion leaders, reference groups and pre-purchase deliberations (Bauer, 1960). The advantage of introducing the brand feature in the fruits and vegetables is because of the standard of that particular product will be increased. For instance, mangoes grown in India; Apples (Himachal) are the famous brands of fruits and vegetables in India. So it becomes essential to extend these branding of fruits and vegetables concept in India due to the FDI allowing the multinational players to enter in India. Based on study conducted by Ali, Kapoor and Janakiraman (2010), suggested in their findings that, fruits and vegetables are mostly purchased daily or twice a week due to their perishable nature as compared to grocery items.

### 3.7 Perceived risk and willingness to purchase

Due to perishable the risk is valued at the highest priority in buying the products. The nature of risk like social risk refers to the probability that a product purchased results in disapproval by family or friends. Psychological risk refers to the probability that a product results in inconsistency with self-image. According to Florax et al. (2005), who conducted a meta-analysis on Willingness to Purchase (WTP) for reduced risk exposure increases by approximately 15% and 80% in going from low to medium and high risk respectively. Time risk refers to the probability that a purchase results in loss of time to buy or retain the product. Overall, perceived risk represents an aggregated impact of these various factors (Kaplan et al, 1974). Jarvenpaa and Todd (1996) suggested there is a perceived personal risk. It is possible that individuals may be benefited because of their purchase behaviour by determining the price and brand factors that explain the brand equity and willing to pay an extra price for a product (Barcala and Díaz, 2006).

### 4. FACTORS AND THEIR MAJOR FINDINGS

Based on the above mentioned literature review and many other researchers it was observed that modern retail has a large presence in the selected products category namely clothing, footwear, educational books and jewellery. So it is essential to study the relation between the different aspects and factors of the buying behaviour towards fruits and vegetables which can be easily examined in table 1:

<table>
<thead>
<tr>
<th>Authors and Year</th>
<th>Variables studied</th>
<th>Major findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berman and Evans (2005)</td>
<td>Place</td>
<td>Shoppers behavior changes or differ with change in the place especially with retail formats</td>
</tr>
<tr>
<td>Yoon C. Cho (2007)</td>
<td>Brand name Gender Attitude</td>
<td>The impacts brand name familiarity and gender, on customers’ attitudes were examined</td>
</tr>
<tr>
<td>Wu, S.I. (2003)</td>
<td>Online shopping</td>
<td>There was a the significant relationship between consumer lifestyle and online shopping behavior</td>
</tr>
</tbody>
</table>
The contribution of the theory of planned behavior by using the social norms, the actual behavior and attitude to purchase can be considered. As mentioned by Shim, Eastlick, Lotz and Warrington (2001)[60], consumer’s attitudes toward internet shopping affected their intentions to purchase. Branded products are more favourable over the Internet channel. Online retail is expected to gain in the selected categories in metros and tier – I cities of India. This will link the opening between the different retailing channels. According to Benito et al (2006) the household that focuses more on supermarkets are advanced in the cycle of their family life, have higher educational levels, and work in more professional activities.

5. CONCLUSION AND FUTURE SCOPE

Fruits and vegetables are the main dietary food products for any individual irrespective of its education, income, knowledge, etc. As it is requirement for the daily consumption the consumer is always in a dilemma, making his purchase decision more complex and unpredictable. As a result it is essential to study all the fundamental and significant factors that shape a systematic outline towards the purchase of fruits and vegetables. Also the development of new retailing formats and future traditional stores that are available in the markets makes the consumers more venerable about their buying decision. This in reflection changes the buying habits of an individual, Group and the social class along with ethnicity and time in making purchases decision of the product. The channel is very critical for the individual who does not have convenient timings for their day to day purchase and can opt for alternative channels like, ready to cook. As these channels also provide ready chopped and sliced fruits and vegetables which are directly ready to cook and eat. Branding of fruits and vegetables will...

<table>
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<tr>
<th>Authors</th>
<th>Segment</th>
<th>Attributes</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roy &amp; Goswami (2007)</td>
<td>Grouped products and Services</td>
<td></td>
<td>The psychographics had a strong correlation with product/service groups with similar purchase frequencies among the college goers of urban Kolkata in India</td>
</tr>
<tr>
<td>P. J. Jayatillake &amp; R. P. Mahaliannaarachchi (2007)</td>
<td>Frequency, gender</td>
<td></td>
<td>No significant differences in the gender and regular purchase pattern from different format</td>
</tr>
<tr>
<td>CihatGunden &amp; Terrence Thomas (2012)</td>
<td>Freshness, Taste and Hygiene</td>
<td></td>
<td>Consumers in making purchasing decisions pay more attention to freshness, taste and hygiene attributes of fresh fruits and vegetables than they do price and nutritional value</td>
</tr>
<tr>
<td>Chikkamath, M., Atteri, BR., Srivastava, SK and Roy, S (2012)</td>
<td>Retail format</td>
<td></td>
<td>Purchase of vegetable in supermarket and at local vendor differs significantly whereas, that, at local market and supermarkets were not differing significantly</td>
</tr>
<tr>
<td>Goksel et al (2009)</td>
<td>Education</td>
<td></td>
<td>Observed that level of education significantly affects the consumer purchase behavior of food item</td>
</tr>
<tr>
<td>Ragaert et al (2004)</td>
<td>Geographical area (smaller and Big cities)</td>
<td></td>
<td>Consumers buying in a big city perceived the nutritional value and health as less important than respondents buying in smaller cities</td>
</tr>
<tr>
<td>Paul and Rana 2012</td>
<td>Organic foods</td>
<td></td>
<td>Consumers purchase healthy food such as organic food as they concern with their health from the selected retail formats</td>
</tr>
<tr>
<td>Mukherjee et al (2012)</td>
<td>Brand, Price</td>
<td></td>
<td>Food and grocery products are largely non-branded products which the consumer prefers as branded products in this category are expensive</td>
</tr>
<tr>
<td>Cherukuri Jayasankara Prasad, AnkitsettiRamachandra Aryasri, (2011)</td>
<td>Lifestyle, Value</td>
<td></td>
<td>The findings from shoppers’ psychographic resulted in segmentation of food and grocery retail consumers into hedonic, utilitarian, autonomous, conventional and socialization type</td>
</tr>
<tr>
<td>Reardon et al (2008)</td>
<td>Type of products</td>
<td></td>
<td>Found out that some 80% of modern retail sales are from staples and processed foods, with fresh produce accounting for some 10-15% of sales</td>
</tr>
<tr>
<td>Kim &amp; Park (2005)</td>
<td>Internet and Online Products</td>
<td></td>
<td>In addition, consumers tend to search more information from the internet when purchasing products online</td>
</tr>
<tr>
<td>Jhamb &amp; Kiran (2012)</td>
<td>Goods and Products</td>
<td></td>
<td>Consumers’ prefer malls and specialty store to purchase various shopping goods like clothing, Footwear and Jewellery more as compared to convenience goods</td>
</tr>
<tr>
<td>Seock and Lin (2010)</td>
<td>Retail store and Culture</td>
<td></td>
<td>The study found that country of residence is a significant and stronger indicator in predicting loyalty tendency than individualism and collectivism dimensions. The results of the study showed that evaluation of the relative importance of retail store attributes is influenced by culture</td>
</tr>
</tbody>
</table>
make the local players battle with the big retail giants entering in the Indian markets through features like packaging, freshness, quantity and innovativeness. Above these factors it is obtainable at affordable price which will help in building the brand value of the beginning of the product through geographical markets and areas. With growing urban consumer demand in terms of quantity, quality, choice and convenience, organized retail is bound to spread out. This will be achievable through government and private organizations. There is also a relation to be established between the socio – demographic factors like education, knowledge, age, sex, income which influences the buyer in purchasing of fruits and vegetables from a range of channels. The remoteness and closeness can be further extended to an in-depth analysis by using the factor analysis on the different segments of the consumers. Gender plays a very important role in purchasing of the fruits and vegetables in different culture, religion, cast and focused group. The bridging down of the traditional and organic products can be considered through the different aspects of the retailing, branding and behavioral point of view.

6. MANAGERIAL IMPLICATIONS

6.1 Shift from unorganized to organized retail format

The study on fruits and vegetables will be important for the diverse retailers to develop effective strategy to conquer the majority of the social class in India. As they still prefer the hawkers, mandis, local mom & pop stores, cart vendors for their purchase through sensory attributes like touch, feel, smell and taste. The purchase of fruits and vegetables is essential to consumers, so the retailers look for the change in the behaviour to purchase the fruits and vegetables for the organized retailer. Seeing that they have variety of products, standard quality, seasonal products and freshness are their key elements. The neighbourhood plays a preliminary role in selecting the store format and converting it into purchase. So retailers as well as the consumers should be aware about the different products and their day to day price to bring in the integrity between the unorganized and organized retailer in India. Moreover this study will help the retailers to classify the different consumers and the pattern they purchase both in product and store selection.

6.2 Consumer profiling

It was observed through the findings by Huddleston et al. (2009) that, the samples that are highly educated have higher incomes than the average household income. Indian markets which are commonly consisting of the buyers are from higher middle class, religion centric and locality driven based on the Social Economic Classification (SEC). These various classification factors determine their association in selecting the retail channel. This will help in developing customer profiling for selecting retail format stores. Also consumer behaviour and branding of fruits and vegetables helps identifying new classification types belonging to specific country and its origin. Branding of these formats will create a sense of excitement in the younger people in purchasing the products. Product with a character, image, and value to a brand is well known by its association that develops the retail formats for an effective marketing campaign for the young kids.

6.3 Product category and Variation

Based on the literature review it is observed that type of products determines the place or format to purchase. These products can be classified into non – organic, organic, non – branded and branded products as a variation in the basket of products. The consumers have a perception that, the products organic and branded applies to be healthy and hygiene. Organic way of cultivating the fruits and vegetables are the major influencing factor that includes healthy, genuine and pest free products. The Asian countries with their different demography and lifestyle are particular about perishable products like fruits and vegetables. So it becomes vital to cater all the local and foreign products available, to the consumers through different retail formats that are operative across globe.

7. REFERENCES


