Consumer’s Perceptions of Values Regarding Different Shelf Levels in Terms of Price

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Abstract

Retail shelves act as extrinsic cues which influence consumers’ perceptions and facilitates them in their purchase dilemma. This study is about determining any possible association between vertical shelf levels and consumers’ perception of values. The assumption that consumers perceive a product at higher place as of higher value (quality) was analyzed by means of primary data and further explained by cue utilization theory. The research attempts to quantify values (extrinsic cue effect) by means of prices of the products. Here, both shelf levels and price are considered as extrinsic cues. In other words, this research analyzed the influence of one extrinsic cue on the other and thus how this affects consumer perception of the product’s value. For this purpose, a primary research was conducted involving consumer group of Swedish people (N=90) and price data was collected for three products placing at different shelf levels. Results from the questionnaire were analyzed by means of one way ANOVA test. The results disapproved hypothesis that was tested yet showed a positive trend for one the value product e.g., coffee. On the basis of result, it can be deduced that further research with different experimental techniques could be applied on the same subject matter to bring more accurate results.

KEY WORDS: Cue, Price, Shelf Levels, Consumer’s Perceptions
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1. Introduction:

Retail industry, confronted with fierce competition, is one of the fastest growing industries in the world. This competition is especially among the firms dealing with fast moving consumer goods (FMCG). The prime reason for the competition is high level of saturations as well as homogenous product offerings that offer little differentiation in terms of technology or function (Sun, et al., 2009). This competition became more intensified with the rise of large and well-organized retail chains such as Wal-Mart which further changed the dynamics of competition. Consequently, retailers shifted their focus from out-of-store tactics to in-store tactics to better cope up with the changing environment. One of the main interests of retailers, that have explored by retailer recently and used as a tool to combat these challenges, was retail shelf. Retail shelf is being designed to stimulate consumers towards unplanned purchases with the help of product shelf manipulations. Currently, retail store has become a bunch of sensory stimuli (Inman and Winer et al, 2009) and every stimuli affect consumer’s purchase intentions. In other words, retail shelf is not just a distribution tool anymore but has become a communication tool (Chandon as mentioned in Karabell, 2009) which communicates different values e.g., quality indicators. Consumers take these stimuli into account while evaluating product quality and solving purchased dilemma. Though each shelf level offers different stimuli, each of these stimuli may not be of equal weight (Sun, et al., 2009) and are dependent on other factors such as products’ brands, packaging etc. Hypothetically, if a consumer purchases a product from top shelf level and it is deemed to be of better quality then such top level is a communicator of high quality or value to that consumer. The present research is undertaken to establish any such relationship of consumer’s perceived values and shelf levels. The objective is to provide the retailers with scientific explanations in order to better deal with the emerging challenges. For this purpose, price is used as a mechanism to quantify the value perception at different levels of shelf. Hence according to the assumption, higher price quotation given by the respondents for a specific shelf level indicated higher value and consequently better quality perception. The survey, conducted among 90 respondents, revealed a hidden fact that higher shelf level can be a quality indicator for few product categories.
1.1. Background

Traditionally, retailers used to think that consumers would like to shop in a store that has the right kind of product assortments. With the emergence of e-shopping, retailers realized that merely products assortments would not be enough to bring the web based shoppers back to the retail stores. Riewoldt (2000) found “rather than merely forming an integral part of corporate strategies, the spaces in which consumers and products are brought together need to create an excitement for shoppers to provide a shopping experience that cannot be equaled by e-commerce”. Schuman, (2007) also noted that retailers are looking for boomerang technology and strategy to make shopping easier and bring back the modern web-based consumers to get into conventional brick-and-mortar stores. Also consumers’ expectation about retail display (Buchanan et al. 1999) gave the retailers an opportunity to bring innovation in the shelf space allocations. Shelf space allocation involves the distribution of appropriate amount of shelf space among different products, together with vertical and horizontal locations, in a supermarket in such a way that the total profits and/or customer satisfaction are maximized (Ruibin, 2009). Retailers also manipulated shelf space to favor certain products, especially those having higher gross margins and sales turnover (Curhan, 1973). These findings provide retailers an inspiration to develop an effective planogram that can meet consumer's perceptual expectations.

Sullivan & Burger (1987) described that the issue of cue utilization and its impact on product evaluation is still being studied, no new theoretical framework has been advanced to guide research in this area. Furthermore, the cue utilization theory is also not well researched to explain the effects and relationship of different cues with regard to vertical shelf placement. As a result, problem related to shelf levels and price perception (as extrinsic cues) lacks concrete theoretical model (Meier & Robinson 2004). Similarly, consumer’s perception of different values and how they make purchased decisions have also not been well researched. Consumer’s information gathering and decision making process is fairly complex process and a comprehensive understanding of consumer product choice behavior has yet to understand in front of the retail shelves (Sullivan & Burger 1987).
1.2. Purpose

The purpose of this research is to find out what is consumers’ perception about different levels of retail shelf in terms of values? In this way, this research aims to provide the retailers an understanding with scientific explanation to design a retail shelf which is in conformity with the consumer’s value perceptions about different shelf levels.

1.3. Limitation

The present paper has few key limitations like time, resources and secondary information. The first one is the lack of literature on the subject specifically dealing with product shelf placements as an extrinsic cue to understand consumer’s value perception for different product categories. The Cue Utilization Theory has not been fully explored in relations to this regard. Therefore, the results cannot be generalized to the entire population of Sweden. Because of the time and resource shortage the experiment was carried out in small sample group. This research is limited to Swedish consumers and is conducted in a small part of the Karlstad city in Sweden. Assuming that the same study can have different result for branded products, this research did not consider factors such as product design, promotional methods and expenditures, competitive position etc. Moreover, as there was not access to any consumer laboratory and it was not possible to design any real shelf, the responses were collected on paper; therefore the impact of height and convenience of product access - which also influence the consumers’ perception of values and quality evaluations - was eliminated. In many cases, consumers purchase branded products and the brand names are the key unit of decision (Ehrenberg 1988). Brand effects were hold constant in this experiments since respondents may already have gained experiences towards such brands and may therefore know the performance of the products in advance [(Andrews & Valenzi, 1971; Render & O’Connor, 1976; Dodds, 1991) (as cited in Hanson, 2005)]. Influence of brand effects, packaging and other intrinsic cue effects were not considered for this particular study because of time constraints. Finally, the present study did not consider consumers’ perception of values in terms of the horizontal placement (no of shelf facings) of products.
2. Literature Review:

2.1. Importance of retail store shelf

It is recognized that the success of any retailer depends on its ability to match its changing environment by continually deciding on how much, where, when and how to shelve products (Hansen, et al 2010). Therefore, both researchers and retail consultants equally believed that retail shelf is an important area in a store which can be used for both satisfying the consumers and maximizing profit. A shelf is a strong stimulus which offers information to consumers about the quality of different products. Again, this Stimuli triggers unrecognized needs or desires and trigger memory. So, with the help of this stimulus retailers try to incite unplanned purchasing. Unplanned purchases may be defined as purchases that are not planned prior to entering the store (Inman et al, 2009). Another, importance of this stimulus for retailer is to better gauge consumers’ product evaluations criteria which will allow them to formulate a planogram consistent with consumer’s choice. Shelf manipulations have gained wide recognition and importance among retailers since its strong impact on sales has been witnessed (Dreze, et al, 1994). This is the reason why manufacturers are also ensured that their products are on display with maximum visibility to the shopper (Cunha, 2010). As shelf placement affects consumer purchase decision-making, retailers plan shelves displays cautiously e.g., taking into consideration height of a shopper, social context and cultural factors (Butterbaugh, 2006). Sometimes, these shelf manipulations are based on the retailers’ own experience that is formed on the basis of observation of consumer buying practices, looking at product unit sales and analyzing consumers’ feedback.

2.2. Product Shelf Placements

Retailers’ objective is to place products in such a way that boost sales and gives an ease to the consumers to pick the products from the shelves. Studies also verify that the availability or ease of retrieval affects consumer’s purchase intention (Menon & Raghubir cited in Dai et al. 2008). Moreover a field study on national supermarkets in America confirms that placements of products on shelves affect consumer purchasing behavior (Cunha, 2010). Similarly, a study by Chung et al. regarding milk sales in New York
showed that a 7% increase in milk sales could be achieved by effective shelf management techniques (cited in Murray, et al, 2010). Similarly, Chandon (mentioned in Karabell, 2009) in his findings noted “If something is located at the top of the shelf, it increases about 20% chances of being noticed by people and the likelihood of your product being chosen”. These instances intensify the motivation that the placement of products is vitally important for success of a retailer. The effective placement of products has also helped Albertsons and Safeway to increase their market share since their beginnings (Johnson, 2007).

It is widely recognized that items are more likely to be chosen when they receive more prominent shelf positions [(Desmet & Renaudin 1998; Dreze et al, 1994: cited in Breugelmans et al, 2005)]. Considering sales and profit in relation to values, retailers divide shelf levels into three categories for their product assortment. The first one is eye-level which is followed by “waist-level” and finally “knee-level (Butterbaugh 2006). Adult’s eye-level is considered as the best slots where relatively expensive products are placed. Eye level is any of several shelves above the knees but below 6 1/2 feet (Drèze, 1994). As most of the customers are right-handed, this level may be chosen to increase the chances that right-handed shoppers will pick them up (Cunha, 2010). Similarly, other studies by Corstjens and Corstjens; Campo and Gijsbrechts have also demonstrated that products placed at hand level or eye level have a higher probability of being selected (cited in Breugelmans, et al., 2005).

Moreover, placement is also done in view of different age groups e.g., junior, middle and tender age. Lower shelves are mostly reserved for merchandising meant for children primarily due to their short height. For instance, kid’s cereals are placed at lower level to meet kids' eye levels while adult cereals are put at the adults' height level (Butterbaugh, 2006). Similarly it is also noted that products on the top shelves attract more eye attention than products on the middle or bottom shelves (Chandon et al., 2009). Again, in the middle range of shelves visibility variation becomes the major influence on product sales. When a jelly was relocated from waist-level to eye-level, the shift added 12 percent increase to the product's weekly sales (Cunha, 2010). All these are some general tendencies and consideration for placements. Besides that, Pam Musante (1995), a grocery manager, has proposed two schools of thought on product shelf placement. According to
him, traditional approach is to place fast movers (products) on the bottom because the customers will bend down to pick up their necessary products and view many other products. Another way is to keep the fast movers (products) at a prime location such as eye level and give them more shelf space. However, merely giving any product more shelf space is not enough instead products need to be placed at the level which is easily accessible to the consumers. A study showed when a heavy 54 oz. juice product was shifted from a non-visible lower shelf to a higher visible location, the sales dropped by 15% because of the difficulty experienced in lifting such a heavy item (Cunha, 2010).

2.3. Meta-belief for Verticality

Research on shelf levels on traditional grocery stores has shown that a product’s absolute and relative shelf position may strongly affect consumer’s choices (Breugelmans, et al., 2005). This meta-belief is supported by human intuition that Meier & Robinson (2004) classified as “objects that are up or high are often considered to be good, whereas objects that are down or low are often considered to be bad”. Even religious beliefs also support people’s intuition about verticality. In the Bible as well it is written that the righteous go “up” to Heaven, whereas sinners go “down” to Hell (Meier & Robinson, 2004). Similarly, Karabell (2009) concluded, “People expect things on the top to be of higher quality and if you’re targeting young people or educated people who don’t buy just relying on brand or price, you will increase the effect of this ‘visual equity’.

Many researchers have used Power as a metaphor for verticality where power difference refers to spatial difference in vertical position. This power control is also evident in social context where people enjoy high level in social hierarchy have control over others (Schubert, 2005). In the same context, Jing (2006) suggested that verticality is associated with dimensions of differentiation that are objective and easy to rank, with higher quality options placed at top and lower quality options placed at the bottom. The same metaphor is studied by Fiske (1992) who explains “people differentiate on spatial position and concluded that universally everything at a high place is considered to have higher power”.

These notional beliefs have given rise to consumer’s perception about values regarding shelf orders which are interpreted as quality indicators or extrinsic cues of the products. The perception of value here means the degree to which the consumer holds belief that
the attributes of the product will contribute in fulfilling the objective of the purchase in their eyes (Skytte & Bove, 2000). Consequently, retail merchandisers are striving to come up with plans which allow them to place the right merchandise at the right shelf level (Stone, 2004, p.4).

2.4. Perceived Price-Quality Relationship

Under the rubric of price-quality relationship, several studies have been conducted which provided mixed evidence. The body of literature summarized by Olson (cited in Zeithaml, 1988) suggested that a relationship exists between price and perceived quality. The price-quality relationship can be traced back to 1949. Knauth (cited in Rao, 2005) mentioned a hosiery retailer’s huge positive sales response due to a price increase from $1.00 to $1.14 apparently because the higher price meant “higher value”. Since then, it has become a belief that a high price product tends to be of superior quality. Such belief is based on the premise that as higher price is an indicator of more expensive inputs in terms of factors of productions, so it will obviously have a higher quality end product (Rao & Monroe, 1988). On other hand, under certain conditions, consumers rationally infer that it is the firm’s own economic self-interest to offer only high quality products at a high price (Rao, 2005). In other words, different price levels e.g., high and low (as an extrinsic cue) have been used to indicate quality of the products.

2.5. Price as an Extrinsic Cue

Retailers take into account the price of the products before they place them on shelves. Price may be defined as “what is given up or sacrificed to obtain something (Zeithaml, 1988). Many empirical studies e.g., Monroe & Olson (cited in Shugan, 1984) have shown that when there is a concern about the product's quality, consumers often rely on price as quality indicator. Price is a crucial determinant in buyer’s purchase decision-making. Thus, consumers weigh the price of the products in terms of what they are paying which is termed as value for money. In a retail context, value for money is the outcome of a trade-off between sacrifices and utilities derived from product and store attributes (Zeithaml 1988). From a behavioral perspective as well, price may be perceived as a product quality cue (Monroe & Krishnan in Zeithaml, 1988). It is one of the most important extrinsic cues that is highly researched and gives attraction (Mercy, 2009). Mostly price is used as a
cue by consumers who are either price sensitive or who believe that price of a product reflects its quality. In addition to that, price can also be important as cue for quality when few other cues are present (Speed, 1998), or when the product cannot be evaluated, or when the perceived risk of making a wrong choice is high [(Cox and Rich 1967; Dodds and Monroe 1985; Monroe and Krishnan 1985; Zeithaml 1988; Mitchell and Greatorex, 1988; 1989) (cited in Larry & Hall. 2003)].

3. Theoretical Framework:

Laurent et al (1994) stated that advances in marketing science can emerge from any dimensions: theory, data and methodology. In this regard, Merton (mentioned in Bryman & Bell, 2007) described the importance of theory and said that grand theories offer few indications to researchers as to how they might guide or influence the collection of empirical data. In the present research, the Cue Utilization Theory has been used as a theoretical model because both the price and shelf levels are extrinsic cues. Therefore this theory may provide attractive structure through which consumers’ perceptions about different levels of retail shelf in terms of price can be assessed.

3.1. Cue Utilization Theory

The cue utilization model was first developed by Cox (cited in Sullivan & Burger 1987). According to this theory, every product consists of an array of cues that serve as surrogate indicators of quality to shoppers (Olson & Jacoby 1972). In other words (Olson & Jacoby, 1972; Richardson et al., 1994) “consumers may try to overcome their uncertainty and the lack of information by selecting one or more indicators (cues/stimuli) as a basis for their assessment of the quality of the product” (cited in Hanson, 2005) but the particular cues are evoked according to their predictive and confidence value (Richardson et al., 1994). PV is the extent to which the consumer perceives or believes that the cue is related to or is indicative of product quality (Olson and Jacoby 1972). On the other hand, confidence value (CV) is the individual consumer's self-confidence in his ability to distinguish the cue and make accurate evaluations and judgments concerning it (Olson and Jacoby 1972).
Further classification is given by Olson and Jacoby (1972) according to which cues can be either intrinsic or extrinsic. Intrinsic refers to attributes related to product, such as ingredients, that cannot be manipulated without altering the physical properties of the product while extrinsic attributes are not part of the physical characteristic of the product (Richardson et al., 1994). For instance intrinsic cues of an energy drink can be its taste, color as well as amount of caffeine, vitamins and herbs. Likewise, brand, packaging, price and shelf levels will be its extrinsic cues. Olson (cited in Rao & Monroe, 1988) proposed that for any product the cue could be derived from the actual physical product (intrinsic cues) or from product-related attributes apart from the physical product (extrinsic cues). Sometimes consumers’ rely on intrinsic cues and sometimes on extrinsic cues depending upon nature of product and consumers’ own product information. Thus, the reliance on one or more cues is risk reduction strategy (Hanson, 2000).

Selected individual studies e.g., Sawyer, Worthing and Sendak, have shown that extrinsic cues can be more important than intrinsic cues. Intrinsic cues are difficult to evaluate when purchase involve complex goods (Darby & Karni, 1973). For the “credence goods” consumers may rely on extrinsic cues as they are being evaluated easily (cited in Zeithaml, 1988). Similarly, Pathak et.al (2009) noted “as intrinsic cues are difficult to manipulate without changing the integral components or make up of a product, marketers are more interested in extrinsic cues and their impact on consumer preferences” (cited in Olson and Jacoby, 1972). In a nutshell, consumers’ quality assessment is dependent on product type and information. Consumers will only fall back to extrinsic cues once they fail to evaluate the intrinsic attributes properly.

3.2. Shelf levels as Extrinsic Cues

From a retailers’ perspective, cues are important because the products that gains attention first (primacy effect) during search process are more likely to be purchased (Breugelmans, et al., 2005). From the literature forwarded by Zeithaml (1988) the salience of intrinsic attributes of a retail shelf depends on whether they can be sensed and evaluated at that time. It is a fact that a consumer cannot always scan the ingredients or taste (Intrinsic) the products and consequently has to rely on the extrinsic features. On the other extreme, extrinsic cues are deemed to be used as quality indicators when the consumer is operating
without adequate information about intrinsic quality attributes. This increases the likelihood of retail shelf to be treated as one of the cues to be weighed for quality assessment of products. Moreover, the process of consumer decision making is no longer governed by intrinsic factors; instead it is extrinsic factors such as shelf levels that are becoming increasingly influential to consumer’s product choices (Sun et al, 2009). The prime reason for this is that consumers cannot always evaluate intrinsic cues (and some extrinsic cues as well) at the point of purchase unless they are provided with some samples to test within the store (Zeithaml, 1988). Furthermore, shelf levels are one of those extrinsic cues which are not product specific and may serve as general indicators of quality across all types of products. However, this is limited to products for which consumers fail to implicate other cues both intrinsic and extrinsic (Zeithaml, 1988). The values that each retail shelf communicates may also differ in terms of product and consumers because Cox stated that consumers are very likely to be selective in their use of cue information (Described in Sullivan & Burger, 1987). This means that a product may communicate different values for two different consumers, even though it is placed on the same shelf level.

4. Developing Research Objectives:

4.1. Origin of research

In the present study, theoretically both shelf levels and price are extrinsic cues. As stated earlier, Cue utilization theory serves as the foundation of the research which will follow deductive process as in chronological order: theory, hypothesis, data collection, findings, hypothesis confirmed or rejected and analysis of theory. According to Bryman and Bell (2007) deductive process includes “what is known about a particular issue and of theoretical consideration in relation to that issue, deduces a hypothesis that must be subject to empirical scrutiny”. Olson (Sullivan & Burger, 1987) stated that consumers have a preference for cue selection when there are multiple cues and this preferred cue affects consumers’ judgment. So, this proposition provides a hunch to see whether shelf level affects consumer’s value judgment of product.
4.2. Main Problem or issues of the research

Based on the literature on price-quality relationship and theoretical model of cue utilization theory, the main issues of this research have been identified. The source of research problem lies in determining consumer phenomenon and establishing association between shelf levels and price perception. So the main objective of the research would be to establish the existence of higher price perception regarding higher shelf levels. The use of this research would be to give the retailers an overview of consumer’s perception about retail shelf and integrate this knowledge in their shelf manipulations.

4.3. Identifying the variables

It is evident from the research problem that the research seeks to find the effects of shelf levels on consumer’s value perception in terms of price. Obviously, the shelf acts as an independent variables and the price as dependent one. Identifying the variables is necessary for formulating the hypothesis of this research.

4.4. Assumption

Based on the deductive theoretical model, literature review and issue of the study as stated above the present research has the following assumptions (null hypothesis or alternative hypothesis).

H1: Consumers perceive products at higher shelf level as of higher price (value).

H0: Consumer does not perceive products at higher shelf level as of higher price (value).

4.5. Selection of significance level & decision rule

In order to test hypothesis the significance level (α) of 0.05 will be used for this research. If the P-value is less than the significant value which is 0.05 then the null hypothesis will be rejected.

5. Research Design:

This is the most important part of the research because it dealt with activities, procedures, information gathering (primary and secondary) to prove the research assumption in a
more reliable and valid manner. From the main issue of the research, it is evident the research has two steps: quantifying the value and then analyzing consumer’s perception.

5.1. **Objective of the research Design**

The main objective of the research design is to find concrete empirical evidence in support of the present study. To put simply, the answer of the following question will be identified: What is the price of the products at different shelf levels? Finally, the hypothesis deduced from the theory will be tested in this section. Selection of the research design will help to cross-check the internal and external validity of the result.

5.2. **Types of data Required**

The research considers several sources for data available on the topic area. Both primary and secondary data was used to analyze the consumer’s perceptions. Primary data was required for consumer demography, buying patterns and price information. Primary data was useful to this particular project because limited secondary data was available pertaining to consumers’ perceptions of values regarding shelf levels. Moreover, secondary data was also used such as books, journals, articles, online data, webpages of firms, governments, semi–government organizations catalogue and so on. Secondary data was utilized to analyze the result in a theoretical framework.

5.3. **Mode of Research Method**

Quantitative information - numerical price data - is required to ascertain the assumption of the study. Furthermore, Bryman & Bell (2007) said that hypothesis deduced from theory follows a quantitative approach normally and it entails the collection of numerical data and exhibiting a view of the relationship between theory and research as deductive, a predilection for a natural science approach. As a result, the research will follow the structured data collection approach which is also classified as quantitative method. Here quantitative research method will help find respondent’s preferences for price of the products at different level of shelves in the light of the cue utilization theory.

5.4. **Research tool for data collection**

Selection of the research tool depended on two consideration:
a. Amount of data.

b. Resource and time limitation.

Since the objective of the research is predetermined, structured questionnaire based survey method was deemed appropriate to collect the price data. Questionnaires based survey was easy for gathering price information. Moreover, for this particular research, questionnaire was a better instrument to convince people to share their values because of its nature of being less time consuming and familiarity.

6. Data collection Procedure:
Here the sample selection, product selection, questionnaire design and data collection were administered.

6.1. Samples
In order to represent the whole population and keep the sampling error low, this research included sample size with both male and females, young and old people. Responses from 90 people were drawn through convenience sampling. A convenience sampling is a type of random sampling that allows you to stop anybody in the street when you wander around your location (Bryman & Bell, 2007, p. 105). In this research people were stopped by around the university and were asked to fill up questionnaire. The sample population was Swedish respondents with male 56% and female 44% who were above 18 years of age. The participant's mean age was 30.45 with standard deviation of 14.04.

6.2. Criteria for product selection
In order to carefully assess consumer price perception about shelves, the product categories were carefully selected. Three different products categories of different price were chosen viz coffee, cooking oil and shampoo. The considerations for the product selection are as follows. Firstly the differences among the consumer value perceptions about different shelf level apart from the product category e.g., value vs. premium. Secondly, the product categories were picked because of the difference in price between the value products and the premium products to ensure that the perceptions of values are
consistent across all types of products and to see whether the selections of cues are product specific or not.

6.3. Designing of the questionnaire

All the questionnaires were printed in Swedish language as the sample included only Swedish people. Secondly, the question format was short and easy to respond. The questionnaire was kept short to attract the respondents. Only eight relevant questions were chosen to trace consumer’s perceptions and closed ended questionnaires were used for this purpose. Close ended questionnaires was useful because respondents could have come up with overestimated price for a product e.g., if there were no price range. The questionnaire was divided into two parts. The first part was meant to determine the consumers’ buying patterns and demographics information. Buying information was useful to distinguish frequent buyers from novice. The frequent buyers are deemed to have higher CV on selection of any cues due to their repeated purchases and familiarity with the retail environment. Cox's model reflects CV as the degree of confidence that consumers have in their ability to distinguish differences in a cue and correctly evaluate those differences. He further described that CV depends on experience of the individual with certain cue. So the result will facilitate to validate the findings of the research (cited in Sullivan & Berger, 1987). The second part (rest of three pages) of the questionnaire was meant to determine the price perception of consumers through price range. Here three pages showed pictures of retail shelf where products of different brands were placed on five different rows of shelves. Each of the three pages has the picture of retail shelf containing images of a single product category e.g., for value product, there were images of different brands of coffee and so were for oil and shampoo on the other two pages. The images of the questionnaire were printed on color to give it a more realistic look. Again, the second part of questionnaire was further divided into three sub groups based on the placement of the products. Here the same question was asked for all product categories in similar format. Also the product, that was manipulated , was marked with red circle to distinguish among other brands.
6.4. Time and venue for Data Collection

The questionnaire was filled in the premises of Karlstad University, Sweden on the spot which took around 3 minutes for each. It was carried out in the afternoon for three consecutive days starting from Monday 2011-07-12 till 2011-07-15.

6.5. Data collection procedure

First the respondents were stopped by around the university and briefed about the experiment. Upon their consent the questionnaire was given to fill up. Data collection included division of samples in three evenly divided groups and the three sub parts of questionnaire about price were assigned to these three groups. This division was on the basis of placement of products on the questionnaire. In the first group, respondents were given questionnaire where Coffee was placed on the top of the first page, oil on the second page in the middle and shampoo on the third page in the bottom. In the second group, respondents were given questionnaire where Oil was placed on the first page on the top, shampoo on the second page in the middle and coffee on the last page on the bottom. Similarly in the last group, Shampoo was placed on the first page on the top, coffee on the second page in the middle and oil on the last page in the bottom of shelf. Price range was given for each of the product (13.5 to 23.5 for Coffee, 25 to 35 for Oil and 27 to 37 for Shampoo). This was done for two reasons. First, it was intended to restrict the responses to a specified limit and secondly to understand how much the price given by the respondent varies from the actual price of the products e.g., higher or lower than actual price. Based on the variations of the prices, the consumer’s perceptions of values were quantified and trends were analyzed. Respondents marked on the question for some questions and also wrote the price for the products at different levels. After collecting the raw data on the questionnaire, column wise tabulation was done for 90 respondents for displaying and further analysis. All the answers of each question were classified under one heading serially. For example, starting from group one, all the answers related to sex were tabulated chronologically. Likewise all the price quoted for Coffee, shampoo and oil were also listed. This column wise tabulation helped comparison, summation and other statistical calculation. The research has compared and examined means of three product categories. Therefore one-way Anova was calculated.
using SPSS software. Several other calculations like Post-hoc analysis and multiple comparisons of means were also estimated.

7. Results:

The data was examined to determine if any basic statistical assumptions required by analysis of variance had been proved or violated. To summarize the result, an F test \( F(2, 87) = 2.364, p<0.005 \), \( F(2, 87) = 1.417, p<0.005 \) and \( F(2, 87) = 5.27, p<0.005 \) showed that the consumers do not perceive products at higher shelf level as of higher price. In other words, the verticality of retail shelf as an extrinsic cue does not communicate any values to the consumers. The comparisons of three means of coffee, oil and shampoo at three shelf levels showed that the F value is statically insignificant as it is higher than the significant level. Thus, the predicted relationship between shelf levels and price (value) failed to prove. Though the null hypothesis can be valid but it can be argued that there is still positive sign that the alternative hypothesis may hold some significance. This can be shown by some other findings that support the assumptions. After analyzing the multiple comparison of mean for different levels, the results showed a positive trend for one of the product category e.g., coffee. See the Figure below.

![Figure 1 Estimated Marginal Means Kaffe Graph](image1.png)

The Post hoc analysis of the three products showed asymmetrical tendency. The multiple comparisons of means only for coffee revealed a positive tendency. The mean difference between upper and middle level is .638 and upper and lower level is 1.633 respectively which showed a relatively upward linear trend. The positive difference denotes that consumers might have higher value perception for coffee when it was placed at top level.
and lower value perception when it is placed at bottom. Likewise, there are no significant positive trends for oil and shampoo on the basis of means comparison (Figure: 2 & 3).

The mean difference is positive between upper and middle only for oil which is 1.047 but the mean differences for upper and lower is -.023. Similarly, the multiple comparison of mean difference for shampoo for upper and middle level were -.854 and that is for upper and lower level was -.448. So it can be deduced that there is not any such positive trend for these two premium products.

Estimated marginal means for the three levels showed that for the top most level, the consumers always have relatively higher price perception for all the products. Once again, the estimated marginal means showed a positive tendency for coffee. The marginal means (15.75, 16.85, and 17.5) for coffee demonstrated that consumers prefer to place higher price at higher shelf level for this product. On the other hand, oil and shampoo showed mixed results (Table: 1).

<table>
<thead>
<tr>
<th>Estimated marginal means</th>
<th>Coffee</th>
<th>Oil</th>
<th>Shampoo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>17.5</td>
<td>29.25</td>
<td>31.05</td>
</tr>
<tr>
<td>Middle</td>
<td>16.85</td>
<td>28.25</td>
<td>32.0</td>
</tr>
<tr>
<td>Lower</td>
<td>15.75</td>
<td>29.25</td>
<td>31.6</td>
</tr>
</tbody>
</table>
Table 1 Estimated marginal means of three products at different levels

8. Discussion and Analysis:

The objective of the study was to explore higher value perception in terms of price in relation to higher shelf level. The aim was to give retailers a concrete support to design a shelf according to consumer’s perceptions. The statistical significance of F-value did not support the hypothesis. The reason behind those can be summarized below:

One of the factors that affected the results was that intrinsic cues are considered more important than extrinsic cues when consumers evaluate product quality for certain products category (Olson, 1972). In many cases, shelf levels are less important than other intrinsic cues e.g., ingredients of products to assess the quality. Consumers depend on intrinsic cues when they have high predictive value. This situation is especially applicable for health related products (Cox stated in Zeithmal, 1988). In the context of present research, coffee is widely consumed but it is not regarded as healthy or nutritional product. Today consumers are health conscious. Nutritional value informed and experienced shoppers (Grubb & Grathwohl, 1967) may not involve themselves in assessing cues when products meant only for their pleasure and taste. Oil and Shampoo, on the other hand, are products that are concerned with consumer’s health which makes them conscious in evaluating their cues before purchased. This careful evaluation may subsequently reduce the possibility of taking into account different shelf levels as value indicator. Zeithmal (1988) added that consumer depends more on intrinsic cues than extrinsic ones when the intrinsic attributes are search attributes. Cholesterol level, percentage of fat for oil and chemical composition for shampoo are important attributes to consumer than relying on its extrinsic cues. Olson (Cited in Sullivan & Burger, 1987) in this perspective said that if consumers demonstrate a preference for intrinsic cues, extrinsic cues with potentially high predictive and confidence values may be excluded from consideration based on relative preference. Moreover, extrinsic cues present more variance in perceived quality (Richardson et al. cited in Chung et al., 2006) which is also evident by looking at different trends of coffee, oil and shampoo. Also, one of the products category used in the research e.g., Head & Shoulder had its brand name effect on consumer’s responses which resulted in little price variations at three levels. Holbrook,
Lehmann and Shaughnessy proposed that for such image-reflective products, extrinsic cues such as brand name and packaging may be more important than other cues (stated in Chung et al., 2006). Head and Shoulder is an image reflective product due to its brand name and most of the respondents already knew the actual price of it. The test had almost the same marginal mean price at three levels. Similarly, the local branded cooking oil had the same brand effect during the experiment and the estimated marginal means was the same for this product at upper and lower level. It can therefore be inferred that the present study should try to minimize or eliminate brand effect. Furthermore, the statistics in this research shows that out of the 90 respondents 60% of them purchased household items by themselves and only 6% of the total respondents purchased once or more than once in a week. This means that the respondents were not frequent buyers. As stated earlier CV is something that relates to experience of the buyer with product and its attributes. So the respondents had lower CV on any extrinsic cue like shelf levels. Cox (In Chung et. al, 2006) stated that for extrinsic cues consumers rely more on high CV/low PV than high PV/low CV. Therefore the perceptions of values based on the these respondents group had an effect on the results.

On the basis of trends explained above, the top shelf level may be perceived by consumers as of high value communicator when dealing with the value products like coffee. The results also indicate that consumers’ shelf level perceptions may be stronger for value products rather than for other products categories e.g., premium. Hence it can be argued that for product categories such as average and premium products the value (e.g., quality) perceptions of the consumers are limited or ineffective for the case of shelf levels. For expensive products consumer may integrate different cues other than shelves only. Furthermore, Cox proposed that consumer’s selection of cue is based on either CV or PV of a cue. Shelf level has been proved to have low CV for certain product categories in this study.

9. Research Implication:

Based on the findings related to coffee, it can be suggested that the consumer’s perceptions – high shelf level is a communicator of high values - might be true. In other words, the verticality of retail shelf may communicate different quality or value perceptions to the consumers for some product categories. On the basis of this trend, it
can be argue that the same assumption might be true for other value products as well. Zikmund (1997) pointed out three value of any business research: identifying an opportunity, implementing a course of action and evaluating the course of action. In this regard retailers can use the trend for the value product as an opportunity to customize shelf design (Dreze, 1994). Later on, they can use in-store tactics and manipulate shelf management techniques for value products to match the consumer's perception. It might help them to attract customer's attention.

10. Reliability and Validity:

The variation of test result from the assumption and the research design entail reliability and validity checking of the research like any other primary research.

**Reliability**

It was realized that questionnaire based survey containing images of products was inappropriate to grasp the consumers’ value perceptions. The data collection procedure (questions and images) which was developed to seek consumer’s perceptions did not produce expected result. It is argued that if the same questions were administered in a consumer laboratory, it could have brought different result. So, retest of consumer’s value perception regarding shelf levels with the help of different measurement indicators can bring different results. Secondly, convenience sample was used and respondents were stopped on the way and they were noticed to put a price randomly. Breyman & Bell (2007) said that researchers need to be scrutinized about their procedures in order to get replication in their experiment. If the same respondents were asked about the price, they might not come up with the same price. So, the data collection procedure with the help of questionnaire can't be reliable.

**Validity**

First of all, sampling error occurred due to failure of coming up with a truly representative sample as only 90 people were approached and out of that only 6% frequent buyers were encountered during experiment. Bryman and Bell (2007) indicated that it is extremely difficult to come up with a truly representative sample. According to Cue utilization theory CV of a Cue depends on the consumer’s experience or confidence (Sullivan &
Consumer’s Perceptions of Values Regarding Different Shelf Levels in Terms of Price

Burger, 1987). As a result, Consumer’s having higher CV on shelf level would have resulted in different results. So, the result cannot be generalized over larger population because the research design lacked external validity.

Secondly, a more realistic and appropriate (supportive of cue utilization theory) results could have achieved if few changes were incorporated. This study could have yielded positive results if the brand awareness of products had been avoided or the study been manipulated by some unknown brands. Aaker (1991) indicated that brand awareness is consumer’s ability to recall product’s information. Due to brand awareness and image effect (Head & Shoulder and Raps Olia), respondents tried to quote the actual price by recalling them. This practice might have prevented respondents from sharing their real perceptions of values. The estimated marginal mean of Oil showed this trend and had the same means at top and bottom level. Likewise the shampoo had very little marginal mean variation at three levels. It is conceptualized that not only brand but also packaging could have affected the test result. Since other variables like brand affected this test result, it raised question about internal validity as well.

In this research the product selection was supposed to be based on consumer’s preference for extrinsic cue. Products should have been chosen only if consumers think that shelf level could be a quality or value indicator for these product categories. During the phase of research design, it was assumed that shelf level (extrinsic cues) can influence value perception on a variety of product categories but consumers have different preference for intrinsic and extrinsic attributes of product (Olson & Jacoby, 1972) and thus their cue selection is product specific. So the measure (shelf level) that is devised for this research to test consumer’ value perception for different product category also denotes measurement validity problem.

11. Future recommendations:

The same research can be performed by increasing the sample size to a considerable level that have more reliability and possibility to include more experienced customer with higher CV on different cues of a retail store. Then the result could be generalized to the rest of the population. Besides that, a field (real life setting) experiment with a more
robust method or the experiment in a consumer laboratory with eye tracking device can also be effective to assess consumers’ perceptions. The research also unfolds two important areas for further research. Firstly, what factors influences consumer’s perceptions of values (quality) about different levels of retail shelf. Secondly, the same study can be performed by using unfamiliar brands so that the influence of products on value perceptions about shelves may be avoided. In addition to this, the research design should include products having no brand image and little or no packaging effect. Since the research is in the initial stage to establish consumer’s value perception with shelf level, the experimental design should include more valid product selection, customer selection and data collection method to increase probability of proving hypothesis.

12. Conclusion:

Zeithman (1988) said that consumer’s value perception is individualistic and the benefit components of value include salient intrinsic attributes, extrinsic attributes, perceived quality and related high level abstractions. So, this research, which was aimed to understand consumer’s value perception on the basis of extrinsic cues (shelf levels) , did not find concrete evidence because consumer’s cue selection is based on relative importance of PV and CV of the respective cues. Finally, researchers have identified some lower level attributes used by consumers to evaluate for purchase decision and these attributes differ from products to products. For example, consumers while purchasing coffee may tend to use extrinsic cues (e.g., shelf level) to evaluate its quality but they might not do so while purchasing shampoo and oils (Zeithman 1988). So, this study can extend consumer’s value perception in retail design by undertaking more research in this area.
13. Reference:

a. Articles


http://www.acrwebsite.org/volumes/display.asp?id=11997 [viewed on 2011-04-11]


29 Schuman. E (2007). 5 innovations changing retail, Baselinemag


b. Books


c. Web Pages
1. Bai, R. (2009). *Shelf Space Allocation*. University of Nottingham Ningbo, China. Available at:
Consumer’s Perceptions of Values Regarding Different Shelf Levels in Terms of Price
Appendix:

Questionnaire:

Du och Dina köpvanor

Vi skulle vilja veta lite mer om Dig och Dina köpvanor. Var vänlig och läs frågorna och ringa in eller fyll i det svar som bäst stämmer in på dig. Du ska fylla i eller ringa in bokstaven före alternativet.


2. Ålder:

3. Vilken är din högsta utbildningsnivå?
   1. Grundskola
   2. Gymnasium
   3. Högskola/Universitet
   4. Annan eftergymnasial utbildning

4. Vem brukar göra inköpen i ditt hushåll?

Här följer några frågor om hur Du gör när Du handlar kaffe. Besvara frågorna så att de beskriver ett typiskt tillfälle när Du handlar kaffe.


<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mer än en gång i veckan</td>
<td>1 gång i vecka</td>
<td>Var fjortonde dag</td>
<td>Ungefär en gång i månaden</td>
<td>mindre än en gång i månaden</td>
</tr>
</tbody>
</table>

Här följer några frågor om hur Du gör när Du handlar matolja. Besvara frågorna så att de beskriver ett typiskt tillfälle när Du handlar matolja.


<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
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<td>Ungefär en gång i månaden</td>
<td>mindre än en gång i månaden</td>
</tr>
</tbody>
</table>

Här följer några frågor om hur Du gör när Du handlar schampo. Besvara frågorna så att de beskriver ett typiskt tillfälle när Du handlar Schampo.


<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1 gång i vecka</td>
<td>Var fjortonde dag</td>
<td>Ungefär en gång i månaden</td>
<td>mindre än en gång i månaden</td>
</tr>
</tbody>
</table>
9. Prisätt produkten som är rödmarkerad inom prisspannet 25.00kr till 35.00kr. Skriv priset ovanför den röda linjen vid kanten av bilden.
10. Prisätt produkten som är rödmarkerad inom prisspannet 27.00kr till 37.00kr. Skriv priset ovanför den röda linjen vid kanten av bilden.
You and your buying habits

We would like to know a little more about you and your spending habits over time. Please read the questions and call in or fill in the response that best fit you. You should fill in or call in letter before option.

1 Sex
   (A) Man   (B) Woman

2 Age:

3 What is your highest level of education?
   (A) Elementary School
   (B) Gymnasium
   (C) High School/University
   (D) Other tertiary education

4 Who likes to make purchases in your household?
   (A) You   (B) Someone else   (C) Approximately equal

Here are some questions about how to do when you buy coffee. Answer the questions so that they describe a typical occasion when you buy coffee.

5 How often do you buy coffee in food shops (such as ICA, COOP, Willys) If you never involves coffee, skip to question 10.
   (A) More than once a week
   (B) 1 time in week
   (C) Fortnightly
   (D) Approximately once a month
   (E) less than once a month

Here are some questions about how to do when you buy cooking oil. Answer the questions so that they describe a typical occasion when you buy cooking oil.

6 How often do you buy cooking oil in food shops (such as ICA, COOP, Willys) If you never deals with cooking oil, skip to question 14.
   (A) More than once a week
   (B) 1 time in week
   (C) Fortnightly
   (D) Approximately once a month
   (E) less than once a month

Here are some questions about how to do when you buy shampoo. Answer the questions so that they describe a typical occasion when you buy Shampoo.

7 How often do you shop for shampoo in supermarket stores (such as ICA, COOP, Willys) If you never deals with Shampoo, skip to question 14.
   (A) More than once a week
   (B) 1 time in week
   (C) Fortnightly
   (D) Approximately once a month
   (E) less than once a month