

# Factor Analysis towards Children Buying Behavior

Megha Virmani

UPTU

**Abstract**—This study examines the role of children in family buying decision-making and investigates factors that seem to have effect on children's level of involvement in family buying decisions. The study was conducted using two samples (children and parent respondents). The respondents' choice and justification thereof was shown in a detailed manner. Data for the study were collected with the instrument of questionnaire, personal interview and secondary sources. The findings of the study revealed that family-buying decisions in contemporary times is more of an outcome of a joint effort in which children play significant and multiple roles in relation to a wide variety of products needed by their families, not just to the items that directly relate to their needs. It was also found that there exists a nexus between perceived level of children involvement in buying decision making and some selected demographic, socio-cultural and economic factors. The study recommended that parents should adopt a democratic approach in arriving at family purchase decisions in order to avoid family conflict. It is also imperative that marketers understand the changing dynamics of family buying decision-making process and the elevated power of children's roles and influences in order to design better marketing strategies that can effectively serve and satisfy the needs of emerging market segment for improved marketing performance.

## 1. INTRODUCTION

A family brings its own values, codes and rituals and represent a special reference group with family members frequently exchanging feedback on consumed products and/or future planned purchases. This interaction is a fundamental building block in influencing purchase behaviour within a family. Various studies showed that the family is changing its structural influence in the society, with in the past holding the traditional role of a providing security is now replaced by a more nuclear family model containing unmarried couples, one-person households or lone-parent families. Aside those individual influence factors, a family consists of different stages (family life cycle) where its members pending on age and social status influences others members to change their buying behaviour to reflect a projected social image. This image projection creates expectation on other family members to adapt their social image and buying behaviour.

## 2. EXTRACTED DIMENSIONS OF CHILDREN BUYING BEHAVIOUR THROUGH FACTOR ANALYSIS

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. In other words, it is possible, for example, that variations in three or four observed variables mainly reflect the variations in fewer unobserved variables. Factor analysis is related PCA is a descriptive statistical technique. The internal consistency of the total response (492) each tested by computing Cronbach's Alpha<sup>1</sup> using SPSS 17.0 It is evident that the Cronbach's alpha of expectation of all statements is 0.785. An alpha value of 0.50 or above is considered to be acceptable for demonstrating internal consistency of the established scale (Cronbach's, 1951). In this case all the values of Alpha exceed the obligatory requirement. Cronbach's Alpha explains the positive relationship to the number of items in the scale. The Cronbach's Alpha value for individual statement for expectation ranges from 0.768 to 0.794. Maximum statement has got more than 0.769, which shows that each statement is reliable and may be included in our further analysis. To check the consistency in perception score, the researcher got high value of Cronbach's Alpha ranging from 0.768 to 0.794. As per the theoretical construct, the Cronbach's Alpha of Perception statements should be higher than expectation score (Cronbach's, 1951). Hence our result supports the theoretical construction.

## 3. VALIDITY TEST FOR SAMPLE ADEQUACY

The value of Kaiser-Meyer-Olkin (KMO) which is a measure of sample adequacy is found to be 0.862. This indicates that Factor Analysis test has proceeded correctly and the sample used is adequate as the value of KMO is more than 0.5 (Kaiser et al, 1983).

### Validity (KMO) and Bartlett's Test of Sphericity

KMO (Kaiser Meyer Olkin) Measures off samples adequacy	0.862
Bartlett's Test of Sphericity	0.000

Therefore it can be concluded that the matrix did not suffer from multi-collinearity<sup>3</sup> or singularity. The result of Bartlett Test of Sphericity<sup>5</sup> shows that it is highly significant (Significance is 0.000), which indicates that the Factor Analysis process is correct and suitable for testing multi-dimension ability. This Bartlett Test of Sphericity tests the hypothesis that the correlation matrix is an identity matrix that we want to reject the Hypothesis i.e. the matrix is unitary matrix. The concurrent Bartlett Test of Sphericity returned an approximate Chi-Square of 2.054E4 with 820 degrees of freedom at 5% level of significance.

#### 4. COMMUNALITY SCORES OF ALL STATEMENT

The communalities for the variables for each framework are presented in Table 6.3.

**Table: Communalities**

S.no	Statements	Extraction
1.	You demand the product because it contains animated character in ad.	.978
2.	You buy the product due to its popularity online	.920
3.	You Purchase the product for your family use as well	.851
4.	You like the product because of its attractive hoarding.	.944
5.	You buy the product after looking at its hygiene contents	.946
6.	You like the product because of its color	.845
7.	You buy the product because you like the free sample	.978
8.	You purchase the product because you like its advertisement on television	.978
9.	You purchase the product because your friend has it	.920
10.	You buy the product as your favourite character promotes it	.765
11.	You buy the product because you like its advertisement in newspaper	.977
12.	You buy the product because your neighbour has it.	.851
13.	You buy the product keeping in mind the brand power	.636
14.	You buy the product because if its colourful background	.944
15.	You buy the product keeping in mind after use condition	.946
16.	You buy the product because of the next product available with it	.970
17.	You buy the product because your friend has it	.969
18.	You buy the product after getting information about it online	.951
19.	You buy the product because if its packaging	.803
20.	You buy the product because your favourite actor promotes it	.757
21.	You buy the product after the school campaign programme	.691

22.	You buy the product because of electronic advertisement	.978
23.	You are attracted Towards a product because of its brand name	.698
24.	You get the product after begging it from your parents	.556
25.	You buy the product after its complete knowledge	.777
26.	You purchase the product as you like the store display of the product	.757
27.	You like the product because of its taste or fragrance	.845
28.	You buy the product because your favourite character is printed on it.	.970
29.	You buy the product because of the add on offer on it	.978
30.	You buy the product due to its information contents	.769
31.	You buy the product because of the colourful display on Television	.978
32.	You buy the product because its establishment in market	.978
33.	You buy the product of your own use	.969
34.	You buy the product with your parents only	.951
35.	You buy the product because your favourite sportsperson promotes it	.781
36.	You buy the product with the permission of your parents.	.781

We have considered 36 statements from our deigned questionnaire. The communalities score emphasize the importance of the statements according to the choices of the respondents. The most impact statement is “You buy the product because of the colourful display on television, you buy the product because of add on offer on it, you buy the product because of its establishment in market, you buy the product you like its free sample, you buy the product because you like ad on television. You demand product because it has animated character printed on it.” (0.978), you buy the product because of the next product available with it, you buy the product as your favourite character is printed on it. (0.970). “You buy the product for your own use, and you buy the product because your friend has it. (0.969). “You buy the products with your parents only, you buy the product after getting its information online. (0.951). These statements imply that children like to buy the product after looking at its advertisement on television, after consulting their friends and parents sometimes. They like to buy product after looking its animated character ad and the other things available with it and also add on offers on it. Children today are also information seekers they buy after getting all the information about it from various sources and buy for their personal use as well. We have calculated communality score for all 36 statements. Only 41 statements retained for our study and rest three are ignored because the communality score of these statements are less than 0.5 (Kaiser et al, 1983). So for further analysis, we only consider 41 statements for our analysis.

**5. TOTAL VARIANCE EXPLAINED**

On the basis of Factor Analysis, we have extracted ten factors having total cumulative variance of 64.889 %. Mode of Advertisement (Factor 1) is the most important factor because it has high variance of 20.122 % followed by Brand Endorsement (Factor 2) having the variance of 15.351 %, Product influence and attributes (Factor 3) is 10.660 %, Packaging and product offer (Factor 4) is 8.962%, Packaging and product offer (Factor 5) is 8.557 %, Product attributes (Factor 6) is 6.396% , content information and display (Factor 7 ) is 5.579 %, buying with parents Factor 8 (4.159 %), health and environment conciseness (Factor 9) is 3.835% and the variance of last t factor is Brand consciousness (Factor 10) as it is having minimum variance of 3.333 % . ( Table)

**Table: Factor analysis of influencing factor of children buying behaviour**

Observation	Loading	% of Variance
<b>FACTOR 1 - Modes of Advertisements</b>		
1. You purchase the product because you like its ad on television.	.910	20.122
2. You demand the product because its animated character in ad	.910	
3. You buy the product because you like its advertisement in newspaper.	.903	
4. You like the product because of its attractive hoarding.	.878	
5. You like the product because of its colourful background	.878	
<b>FACTOR 2 – Brand Endorsement</b>		
1. You buy the product because your favourite actor promotes it.	.971	15.351
2. You buy the product because your favourite sportsmen is in it	.971	
3. You buy the product because your favourite cartoon character promote it.	.969	
4. You like the colourful display of the ad on TV	.969	
5. You like the product after the school ad campaign.	.775	
<b>FACTOR 3- Product Influence</b>		
1. You buy the product because your neighbour has it	.860	10.660
2. You purchase the products for your family use as well.	.860	
3. You select the product for your own use.	.851	
4. You like the product because of your friend suggestion.	.851	
<b>FACTOR 4-Packaging and Product Offers</b>		
1. You like the product because of its packaging color	.918	8.962
2. you like the packaging material used	.417	
3. you like the design of wrapper	.918	

4. You liked the innovation used in packaging like tamper-proofing, child-proofing, easy-open store, easy-carry, and non -breakability.	.918	
<b>FACTOR 5-Product Availability</b>		
1. You buy the product because of it was only available that time.	.953	8.577
2. You buy the product because your favourite character is printed on it.	.953	
3. You buy the product your favourite character promotes it.	.745	
<b>FACTOR 6 - Product Attributes</b>		
1. You buy the product because of its fragrance	.915	6.396
2. You like the product because of its colour.	.915	
3. You buy the product because of natural product features	.721	
4. You like the product because of its sensitivity issue for children.	.608	
<b>FACTOR 7- Content of Information and Display of Product</b>		
1. You buy the product due to its information content.	.846	5.579
2. You purchase the product because of the store display of the product.	.717	
3. You buy the product after getting information about it online.	.633	
4. You buy the product after getting its complete knowledge from near sources.	.531	
<b>FACTOR 8-Buying with Parents</b>		
1. You buy the products with your parents only.	.961	4.195
2. You get the product after begging it from your parents	.961	
<b>FACTOR 9-Health and Environment Consciousness</b>		
1. You buy the products after looking at its hygiene contents.	.796	3.835
2. You buy the product keeping in mind it's after use condition.	.796	
<b>FACTOR 10-Brand Consciousness</b>		
1. You buy the product you like its brand image.	.748	3.333
2. You are attracted towards a product because of its brand name	.606	
3. You buy the product keeping in mind the brand power.	.500	

**Factor1: Mode of Advertisement:** The research study undertakes five statements based on the analysis. Purchase the product because you like its ad on television. Percentage of variance is same i.e. 0.910 in both the cases and hence relate to the highest percentage of variance i.e. 20.122. This factor has the maximum importance in the mind of children due to its variance count. The major findings of this study have the following important implications for managers and marketer. Marketer needs to realise that these children are in their formative years of their life and any advertisement which

delivers the message inappropriately can make this segment adopt the product which can harm their future.

**Factor2 Celebrity Endorsement :** Celebrity endorsements and ambassadors have a long-proven track record of marketing effectiveness and it is widely acknowledged that they are particularly influential on the younger segments who seek inspirational role models to whom they listen and with which they aspire to associate. In this factors extracted five statements were considered based on their endorsement and children mind-set. Children of all age groups are strongly influenced by the presence of celebrities in the advertisements as they like the presence of celebrities in the advertisements. Children try to emulate the acts which are performed by the celebrities.

**Factor3: Product Influence:** Product attributes play a very important role in marketing from the perspective of the marketer and consumer and it has long been recognized as an opportunity to set the marketer's brand apart from competition. Consumers also value attributes since they are used as the basis for evaluating a product. They attract children to buy considered mainly four statements that is buying because neighbour has that product, for their family use, for their personal use or because of friend suggestion in buying all help a child to buy the product in order to get influenced by the buying pattern of their score shows the total percentage of variance of 10.266 respectively elaborating all statements as ultimately make the buying as influence most by the neighbour buying need and coping of its behavior.

**Factor4 Packaging :** Packaging is one of the most important parts of marketing planning and it plays a key role on marketing products and services. Packaging has become itself a sales promotion tool for the organizations. The consumer's buying behavior also stimulated by the packaging quality, color, wrapper, and other characteristics of packaging. Packaging is a whole package that becomes an ultimate selling proposition, which stimulates impulse buying behavior. Packaging increases sales and market share and reduces market and promotional costs. Package appeals consumer's attentiveness towards a certain brand, increases its image, and stimulates consumer's perceptions about product. Furthermore, packaging conveys distinctive value to products. The results of this study did support the propositions listed factor such as , visual elements of the package influence choice of the product to a great extent, and graphics and color are frequently the major influence.

**Factor5 Product availability :** With the advancement in the technology and availability of so many options in the market the children are getting aware about the product existence as well as about the existence of other competitors in any category. It deals with so many assumptions of buying patterns related to the so many options and comparisons among them to buy the best among all. Points like availability involves like you buy the product as it was only available that time total factor. 953, other points like buying because of

favourite character print on it .953 and last promotion done by favourite friend in school or play area .745. it ultimately turns the percentage of factor as 8.5777. The markets and the marketers attract the children with so many options and also the benefits of using one over other for the selling or profit purpose and the child end up buying.

**Factor6 Product attributes:** Product attributes are an inherent quality considered as an essential factor for consumers' purchasing intention for product. Despite the increase of consumer interest in the continuous used of a product, there is relative little empirical research on product attributes. According the data gathers related to the attributes the product is preferred over the other due to its fragrance or flavour .915, equally important with the color point .915, for its natural features not at harmful in any way totally made with natural material .721 and lastly based to the sensitivity issue for children like delicate skin or soft skin the impact is .608. The total percentage of variance is 6.239 and make the buying based on the additional features in any product.

**Factor7 Content information and display:** The content of information and the detail benefits of the product help the children in buying decision as they are getting more aware day by day through advancement. The simplest way to display products for sale is by adding a Product Reference field to a node type and setting its display formatter to *Add to Cart form*. The research shows the importance of four statements like buy product due to its information .846, purchase the products the product you liked the store display .717, buying after getting its information online .633 and by after obtaining its complete knowledge form near sources.531. The total percentage of variance result to5.579 making it a important factor in buying process.

**Factor8 Buying :** The aspect of buying with the parents considered two statements you buy the products with parents only and you get the product after begging the product form them. Both even shows the equal loading number that is .961 and the total percentage of variance comes out to be 4.95 for all the statements.

**Factor9 Health and Environment Consciousness :** Now a day's people become more sensitive about their nutrition, health and value of the food that they consume. Increase in knowledge made humans not only taking more care of themselves but also environment for healthy and safety purposes. Environmental knowledge involves what people know about the environment, key relationships leading to environmental aspects or impacts, an appreciation of whole - systems, and collective responsibilities necessary for sustainable development.

**Factor10-Brand Consciousness :** Branding a product means a long-term investment in building that brand by spending on promotion, advertising and packaging. A brand is a promise of the seller to deliver specific set of benefits or attributes or services to the buyers. Today's kids are well informed, better

than their parents. This is because virtually from birth today's children are exposed to TV commercials, banner ads, billboards, logos, and product promotions. The researcher wishes to provide valuable insights to the marketers on the level of brand consciousness among children and its influence on the family buying behavior. It studies the following statements related to brand as you buy the product as you like its brand image .748, you the buy because you like its brand name. .606 And you like the product as of its brand power .500 total percentage of variance comes out to be 3.333.

## 6. CONCLUSIONS AND RECOMMENDATIONS

This study has shown that in contemporary times, the role of children in family buying decisions is becoming increasingly significant, as many factors and forces have been identified to influence the role and actions of children. Based on the above findings, the following recommendations made that Marketers must take environmental factors seriously. Proper knowledge/understanding of the socio-cultural development of the target market is pertinent for business survival and growth in an ever-changing environment; Finally, marketers are to explore emerging present and future market in order to inculcate brand loyalty in young buyers in the quest of continued sales later. This can be achieved by developing an appropriate communication strategy that will present portrayals of the family buying decision-making process thereby, evoking the desired responses of increased patronage and improved marketing performance.

## 7. LIMITATIONS AND FUTURE RESEARCH

The following limitations of the study provide direction for future investigations:

- The study was carried out on only 5 categories of products;
- Further research should look into extending the sample of this study to other states of the country varying with different cultures, norms, values, family composition and family type/structure.

A study on the income levels of families (low-income and affluent families) and its impact on children's roles during family buying decision-making should also be extensively conducted.

## REFERENCES

- [1] Ali A., Mustafa S., Batra D.K, Ravichandran N. and Rehman S.U. (2012). "Examining the Children's Influence in Family Decision Making in Delhi, India". *International Journal of Scientific and Engineering Research*, Vol.3, Issue 2, February.
- [2] Assael H. (1998). *Consumer Behavior and Marketing Action*, South Western College Publishing, Cincinnati, Ohio. Sixth edition,
- [3] Belch G.E, Belch, M.A and Ceresino, G. (1985). "Parental and Teenage Child Influences in Family Decision-Making". *Journal of Business Research*, Vol.13, 163-176.
- [4] Carlson, L. and Grossbart. C. 1988. "Parental Style and Consumer Socialization of Children." *Journal of Consumer Research*, 15, 77-94.
- [5] Foxman, E.R., and Tansuhaj, P.S., (1988), "Adolescents' and Mothers' Perceptions of Relative Influence In Family Purchase Decisions: Patterns of Agreement and Disagreement", *Advances in Consumer Research*, Vol.15, 449-453.
- [6] Gbadamosi A. (2012) "Exploring Children, Family and Consumption Behaviour: Empirical Evidence from Nigeria". *Thunderbird International Business Review*. Vol. 54. No. 4. July/August. Pp. 591-605.
- [7] Gupta, S., and Verma, D. (2000) "We, Not Me. Who Will Buy", *Indian Management*, pp.61- 65.
- [8] Ishaque, A. and Tufail, M. (2013). "Influence of Children on Family Purchase Decision: Empirical Evidence from Pakistan". *International Review of Management and Business Research* Vol. 3 Issue. 1
- [9] Maxtensen A. and Gronholdt L. (2008). "Children's Influence on Family Decision Making". *Innovature Marketing*, Vol. 4, Issue 4.
- [10] McNeal, J.U. and C.H. Yeh. 1997. "Development of Consumer Behaviour Patterns among Chinese Children." 14(1), *Journal of Consumer Marketing*, 45-59.
- [11] Munroe, R.L. and Munroe, R.H. (1972). "Obedience among Children in an East African Society". *Journal of Cross-Cultural Psychology*, 3, 395-399.
- [12] Schiffman, L.G. and Kanuk, L.L. (2000). *Consumer Behaviour*, New Jersey: Prentice-Hall Inc. 7th Ed.
- [13] Sheth J.N (1974). A Theory of family Buying Decisions in Consumer Behaviour and Marketing Action," in Assael H. (eds). Boston, USA.
- [14] Solomon, M.R (2004). *Consumer behaviour: Buying, having and being*. Upper Saddle River, NJ: Pearson Education. 6th ed.
- [15] Suwardinata H. (2011). Children's influence on the Family Decision-making Process in Food Buying and Consumption: An Empirical Study of Children's Influence in Jakarta-Indonesia. An Inaugural-Dissertation for the award of Doctorate degree.
- [16] Verma, D.P.S. and Kapoor S. (2003). Dimensions of Buying Roles in Family Decision making. *Management Review*, December, pp. 7-14.