Impact of Sibling on Children's Influence in Family Purchase Decisions

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Abstract.Present paper aims to focus on impact of sibling(s) on the influence exerted by children in family purchase decisions in India, a country with distinct cultural characteristics. This area has received limited attention from consumer behaviour researchers from a marketing perspective. This research seeks to fill that gap. This study provides empirical evidence based on primary data, obtained from children in the age group of 13-18 years, studying in various schools in Delhi, India. Mixed-factorial repeated measures ANOVA was applied to ascertain the statistical significance of differences in the influence exerted by single children and children who had siblings. Contrary to previous findings, we find that children's influence across decision making stages is not affected by the presence/absence of child's sibling(s). We conclude with a discussion of the findings and suggestions for further research.

Keywords: Family decision making, children's influence, sibling

1 Introduction

Past researches in the area of children's influence (Nancarrow, 2011; Guneri et al., 2009) amply reveal that children have significant influence on family purchase decisions for a wide array of products, and this influence is increasing over time (Madhavi et al., 2011; Chavda et al., 2005).Children influence family buying decisions in four different ways. First, children influence their parents to buy products for their individual consumption. Second, children have their own pocket money and they decide and buy products on their own. Third, children influence their parents' choices for family products for shared consumption. Lastly, children also influence purchase of products that are meant for or use by their parents alone (McNeal, 1992).

Past Studies have examined children's influence on purchase decisions across different decision making stages (Martensen and Gronholdt, 2008; Swinyard and Sim, 1987), product types (Foxman et al., 1989; Nancarrow et al., 2011), media effects on children (Anderson et al., 2008; Marshall et al., 2007; Chan and McNeal, 2006), communication patterns/parental style (Shahrokh and Khosravi, 2013), children's age (Beatty and Talpade, 1994; Mangleburg, 1990),

children's gender (Lee and Beatty, 2002; Hall et al., 1995), family type (Flurry, 2007), parental education (Moschis and Mitchell, 1986), and family income (Ekstrom, 2004).

Obviously, past research has contributed greatly to our understanding about children's influence in family decision making; however, much remains to be explored as majority of these studies have originated from and focused on children in developed countries in West (McNeal and Yeh, 1997), which generates a need for the analysis of the subject in other countries which are developing (Sidin et al., 2008) and are significantly different from the developed ones in terms of family structure, values, norms, and behavior, which affect the role that children play in family decision making process to allow the researchers make better comparisons and generalizations.

To expand understanding of children's influence in family decision making, the present research focuses on impact of presence/absence of sibling(s) on the influence exerted by children in family purchase decisions in India.

2. Literature Review and Hypotheses development

Past research has identified stages of decision making process as an important source of variation in children's influence in family purchase decisions (Mangleburg, 1990) where different individuals within a family are involved differently (Jenkins, 1979; Davis, 1970). The influence of children, therefore, can vary across the different stage of the decision-making process (Darley and Lim, 1986; Belch et al., 1985). With few exceptions, past studies have reported that children exert the maximum influence at the purchase initiation stage (Wang et al., 2004); Talpade and Talpade, 1995) and the influence declines significantly with the choice stage (Wang et al., 2004).

A very limited number of past studies have also explored the impact of presence of siblings on children's influence in family decisions.In the birth order literature in psychology, there is on-going debate about the effect that birth order and number of siblings have on personality development, level of rebelliousness, language development, and overall intelligence (Skinner, 2003). There is some evidence that first born/only children are more intelligent than sibling children and have better-developed verbal skills (Parker, 1998), although there are nearly as many studies where the results equivocal.Similarly, Ronner et al. (2007) suggested that the mere presence of siblings in a family will decrease a child's perception of the amount of relative influence s/he has on purchase decisions. However, with decreasing birth rates more households

are having fewer children and many households have single children. As a result, birth order may have less importance in contemporary family structures.Based on limited literature available, following hypothesis is proposed:

H1: Children's influence in stages of family decision making process varies across presence/absence of sibling(s) of children.

3. Methodology

3.1 Data collection and sample profile

A cross-sectional survey method was carried out with "structured non-disguised" questionnaire to collect the primary data for this study from children in the age group 13 to 18 years. Children were given a choice to complete the questionnaire in the language, i.e., English/Hindi, which they felt most comfortable with. Each version of the questionnaire required 20-30 minutes to complete. Participants were told that their responses would remain anonymous and confidential. No monetary incentive was provided. The content of the questionnaire was tested thoroughly for ease of completion with a convenience sample of 50 children. All questions were easy to answer, requiring a simple selection of the choice on a 5 point scale.

The sample was drawn from various schools located in urban areas in Delhi, India. Schools were selected on quota sampling basis to allow a reasonable representation of different socio-economic groups and cultures. The questionnaire was administered personally to the children in their class itself in the presence of their teachers and any clarification and/or difficulty were attended on the site that ensured 100 percent child response rate.

Only fully completed questionnaires are included in the study. All the 450 distributed questionnaires were received, of these, however, only 384 (a response rate of 85 percent) were found suitable for further analysis in the present study. The data collection period lasted for eight months from March 2015 to October 2015. The sample consisted of 25 single children and 359children having sibling(s).

3.2 Product Profile

Only those children participated in the survey in whose families at least one product out of three products, i.e., mobile phone, computer, and cycle,has been purchased in the last two years mainly for the child's own use hereafter called as "*child product*". The purchased product

was identified by each respondent in the beginning of the survey and answered questions accordingly.

3.3 Scales Used in Study

Children's influence in the stages of the family decision making process is conceptualized in this study as the extent to which s/he has been engaged with various acts or activities relative to each of the three basic stages (purchase initiation, information search, and final decision making) of the decision making process for the purchase of child product. A ten item scale developed by Talpade and Talpade (1995) has been used to measure influence perceptions of children. Out of the ten items, three items (e.g., *in bringing up the idea that you should have a particular product*) measured child's influence in purchase initiation stage, two items (e.g., *in the examination of different brands or models of the product at the store/shop*) measured child's influence in information search stage, and five items (e.g., *in deciding on which store to actually buy the product from*) measured child's influence in final decision making stage.A five point scale ranging from In this regard a five-point scale ranging from "very high" to "nil" has been used to solicit the required responses from children.

3.4 Reliability Analysis

To assess the reliability of the scale items, reliability coefficient Cronbach alpha was calculated for all the items in the constructs used in the questionnaire.The reliability analysis generated Cronbach Coefficient Alphas scores of 0.72, 0.76, and 0.70 for the three sub-scales of construct 'family decision making' which are higher than the minimum cut off limit of 0.60 as recommended by Nunnally (1967) (see Table 1).

Table 1: Reliability Analyses of Measure

Scale Items	No. of Items	Child Product
Decision Making Stages		
Purchase initiation stage	3	.72
Information search stage	2	.76
Final decision making stage	5	.70

4. Data Analysis and Findings

In order to determine if the presence/absence of siblings had an effect on influence exerted by children across stages of family decision making process, mean influence scores of children having no siblings (i.e., single children) and children who had siblings were computed across decision making stages and are presented in Table 2.The mean influence score of single children and children having siblings across three decision making stages appears to be different from each other also the mean influence scores of single children are higher than the mean influence scores of children having no siblings. Thus, indicating that children do exert influence in family decision making and this influence is affected by the presence/absence of their siblings.

Table 2: Mean Scores[1, 2] and Standard Deviations for Children's Influence in Decision Making Stages

Children's siblings	Decision making stage (DMS)[1,2]		
	Purchase Initiation	Information Search	Final Decision Making
Single child (N = 25)	3.56 (0.83)	3.72 (1.04)	3.30 (1.00)
Sibling(s) (N = 359)	3.44 (0.88)	3.46 (1.12)	3.06 (0.83)

Notes: 1. The responses were measured on a 5-point scale: 5 = very high, 4 = high, 3 = moderate, 2 = low, and 1 = nil.

2. Numbers in parentheses are standard deviations.

To ascertain the statistical significance of differences in mean influence scores as reported in the preceding paragraph, mixed-factorial repeated measures ANOVA was applied, with 'decision making stages' (3-levels, i.e., purchase initiation stage, information search stage, and final decision stage) as within-subject factor, and 'siblings' (2-levels, i.e., no-sibling and siblings) as between-subject factor.

For mixed-factorial repeated measures ANOVA, it is necessary that the data meet three homogeneity assumptions, i.e., assumption of sphericity (tested through Mauchly's test of sphericity), assumption of homogeneity of intercorrelations (tested through Box's test of equality of covariance matrices), and assumption of homogeneity of variance (tested through Levene's test of equality of error variances). All the three tests should show insignificant results to meet these underlying assumptions. The assumption of sphericity is found violated (see Table 3), hence, degrees of freedom of F-ratios was suitably corrected by using Huynh-Feldt estimates of sphericity as the epsilon value was found to be greater than 0.75 (Field, 2009).

Table 3: Results Relating to Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
DMS[1]	.949	19.842	2	.000	.952	.959	.500

Notes: 1. DMS: Decision making stages: 1 = Purchase initiation stage, 2 = Information search stage, and 3 = Final decision stage. 2. The responses were measured on a 5-point scale: 5 = very high, 4 = high, 3 = moderate, 2 = low and 1 = nil.

The assumption of homogeneity of inter-correlations has been tested using Box's test of equality of covariance matrices (see Table 4). This assumption has been satisfied as the value of Box's M statistic (p = 0.750) is found to be larger than the alpha level of .001 (Pallent, 2005; Tabachnick and Fidell, 2012).

Table 4: Results Relating to Box's Test of Equality of Covariance Matrices

Box's M	F[1]	df 1	df 2	Sig.
7.182	1.142	6	9519.478	0.335

Note: 1. Significant at p < 0.001.

Results related to Levene's test of equality of error variances are reported in Table 5. Results suggest meeting the assumption of homogeneity of variance at a conservative cut-off level of .01 as suggested by Tabachnick and Fidell (2012).

Table 5: Results Relating to Levene's Test of Equality of Error Variances

Decision Making Stages	F[1]	df1	df2	Sig.
Purchase initiation	.314	1	382	.576
Information search	.406	1	382	.524
Final decision	.559	1	382	.455

Note: 1. Significant at p < 0.01.

The main effect relating to 'family residence' variable is reported in Table 5.19. The results, in overall terms, reveal that if all other variables are ignored, influence exerted by children in rural families in purchase of child and family product is different than the influence exerted by children in urban families, F (1, 764) = 5.627, p = 0.018.

Table 6: Results Relating to Tests of Between-Subjects Effects

Source	Sum of Squares	df1	df2	Mean Square	*F*-ratio[1]	Sig.
Children's siblings	3.029	1	382	3.029	1.686	.195

Note: 1. Significant at p < 0.05

Table 6 reports the insignificant effect of variable 'siblings' on the influence exerted by children in family purchase decisions, F (1,382) = 1.686, p = 0.195. The result reveals that if all other variables are ignored, influence exerted by single children is not significantly different than the influence exerted by children who have sibling(s), F (1,382) = 1.686, p = 0.195. The results thus provide no support for H1. This result is in contrast with the results of past literature (Skinner, 2003) in which it has been suggested that the mere presence of siblings in a family will decrease a child's perception of the amount of relative influence s/he has on purchase decisions (Ronner et al., 2007).

The results discussed so far pertain to the omnibus repeated measures ANOVA. A limitation of the omnibus results is that they point to the fact whether differences in mean scores across levels/groups are significant or not in overall terms. The results, however, do not provide information as to which pairs of mean scores are significantly different. In order to gain this information, pairwise comparisons were performed in respect of children's influence in decision making stages across siblings of children using Bonferroni adjustments. The results are summarised in Table 7.

As expected, the variable 'siblings' has no impact on the influence exerted by children across any of the stages of family decision making process as can be observed from the results reported in Table 7.However, the differences of mean influence scores of single children and children having siblings are positive in all the three cases, thus indicating that presence of siblings decreases a child's influence in family purchase decisions though not substantially.

Table 7: Results Relating to Pairwise Comparisons[3]

			Mean			95% Confidence Interval for Difference	
DMS[1,2]	(I) Single child	(J) Siblings	Difference (I-J)[4]	Std. Error	Sig.	Lower Bound	Upper Bound

1	Single child	Children with siblings	.122	.181	.502	-.235	.478
2	Single child	Children with siblings	.263	.231	.255	-.191	.717
3	Single child	Children with siblings	.239	.174	.171	-.103	.581

Notes: 1. DMS: Decision making stages are: 1 = Purchase initiation stage, 2 = Information search stage, and 3 = Final decision stage. 2. The responses were measured on a 5-point scale: 5 = very high, 4 = high, 3 = moderate, 2 = low and 1 = nil. 3. Significance level reported after Bonferroni adjustments. 4.Significant at p<0.05

5. Discussion

The study was conducted in Delhi for the purpose of finding out the impact of presence/absence of a child's sibling(s) on the influence exerted by him/her across the stages of the decision making process for child product. It has been identified that children do exert influence in the family purchase decisions for the products meant for their own use; however, this influence is not affected by the presence/absence of their sibling(s). The results are not surprising as with decreasing birth rates more households are having fewer children and many households have single children. As a result, birth order may have less importance in contemporary family structures.

6. Limitations

Though the study entails interesting findings and managerial implications, a few caveats may be pointed out here. Like other studies, this study too has certain limitations that affect the generalization of its findings. The primary limitation of this research is the use of a convenience sample. The study is conducted only in urban areas of Delhi (India). Nonetheless, future studies should use random and larger samples of the population to further increase the generalizability of the results obtained in this study. Also future studies should examine purchases made by and for use of the family as a whole, as well as incorporating a broader range of ages.

7. References

Anderson, E.R., Hetherington, E.M. and Clingempeel, W.G. (2008).Transformations in Family Relations at Puberty: Effects of Family Context.*Journal of Early Adolescence*, 9(3), 310-334.

Beatty, S.E. and Talpade, S. (1994). Adolescent Influence in Family Decision Making: A Replication with Extension. *Journal of Consumer Research*, 21(2), 332-341.

Belch, G.E., Belch, M.A. and Ceresino, G. (1985). Parental and Teenage Child Influences in Family Decision Making.*Journal of Business Research*, 13 (2), 163-176.

Ronner, C.B., Hunt, J.B. and Mallalieu, L. (2007).Sibling Effect on Preteen Children's Perceived Influence in Purchase Decisions.*Young Consumers*, 8(4), 231-243.

Chan, K. and McNeal, J.U. (2006). How Rural Children in China Consume Media and Advertising. *Young Consumers*, 7(3), 39-50.

Chavda, H., Haley, M. and Dunn, C. (2005).Adolescents' influence on family decision making, *Young Consumers*, quarter 2, pp. 68-78.

Darley, W.K. and Lim, J.S. (1986). Family Decision Making In Leisure-Time Activities: An Exploratory Investigation of the Impact of Locus of Control, Child Age Influence Factor and Parental Type on Perceived Child Influence. *Advances in Consumer Research*, 13(1), 370-374.

Davis, H.L. (1970). Dimensions of Marital Roles in Consumer Decision Making.*Journal of Marketing Research*, 7(2), 168-177.

Ekstrom, K.M. (2004). Guest Editor's Introduction: Family Consumption. *Consumption Markets and Culture*, 7(3), 185-190.

Field, A. (2009). *Discovering Statistics Using SPSS* (2nd Eds.), Delhi: Sage Publications.

Flurry, L.A. (2007). Children's Influence in Family Decision Making: Examining the Impact of the Changing American Family. *Journal of Business Research*, 60(4), 322-330.

Foxman, E.R, Tansuhaj, P.S. and Ekstrom, K.M. (1989). Family Members' Perceptions of Adolescents' Influence in Family Decision Making. *The Journal of Consumer Research*, 15(4), 482-491.

Guneri, B., Yurt, O., Kaplan, M.D., and Delen, M. (2009).The Influence of Children on Family Purchasing Decisions in Turkey.*Asian Journal of Marketing*, 2(1), 20-32.

Hall, J., Shaw, M., Johnson, M. and Oppenheim, P. (1995).Influence of Children on Family Consumer Decision Making.*European Advances in Consumer Research*, 2(2), 45-53.

Jenkins, R.L. (1979). The Influence of Children in Family Decision-Making: Parents' Perceptions. *Advances in Consumer Research*, 6(1), 413-418.

Lee, C.K. and Beatty, S.E. (2002). Family Structure and Influence in Family Decision Making. *Journal of Consumer Marketing*, 19 (1), 24-41.

Madhavi, C., Sethuraman, K. and MohanRam, A.S. (2011).Teenagers' Influencing Strategy in the Purchase of Selected Durable Products.*European Journal of Social Sciences*, 24(4), 466-473.

Mangleburg, T.F. (1990). Children's Influence in Purchase Decisions: A Review and Critique. *Advances in Consumer Research*, 17(1), 813-825.

Marshall, R. and Reday, P.A. (2007).Internet-Enabled Youth and Power in Family Decisions.*Young Consumers*, 8(3), 177-183.

Martensen, A. and Grønholdt, L. (2008). Children's Influence on Family Decision Making. *Innovative Marketing*, 4(4), 14-22.

McNeal, J.U. (1992). *Kids as Customers - A Handbook of Marketing to Children*, New York: Lexington Books.

McNeal, J.U. and Yeh, C.H. (1997).Development of Consumer Behavior Patterns among Chinese Children.*Journal of Consumer Marketing*, 14(1), 45-59.

Moschis, P. and Mitchell, L. (1986).Television Advertising and Interpersonal Influences on Teenagers' Participation in Family Consumer Decisions.*Advances in Consumer Research*, 13(2), 181-186.

Nancarrow, C., Tinson, J. and Brace, I. (2011). Profiling Key Purchase Influencers: Those Perceived as Consumer Savvy. *Journal of Consumer Behaviour*, 10(2), 102–110.

Nunnally, J.C. (1967). *Psychometric Theory* (1st Eds.). New York: McGraw-Hill.

Pallent, J. (2005).*SPSS Survival Manual*. Australia: Allen and Unwin.

Parker, W.D. (1998).Associations between Birth Order and Personality Traits: Evidence from Self-Reports and Observer Ratings. *Journal of Research in Personality*, 32(4), 498-509.

Shahrokh, Z.D. and Khosravi, M.E. (2013). Children's Influence in Family Consumption Decisions in Iran. *Journal of Applied Environmental and Biological Sciences*, 3(12), 44-51.

Shoham, A. and Dalakas, V. (2003). Family Consumer Decision Making in Israel: The Role of Teens and Parents. *Journal of Consumer Marketing*, 20(3), 238-251.

Sidin, S.M., Rahman, A.M.K., Rashid, A.M Z., Othman, M.N. and Bakar, A.A.Z. (2008).Urban Children's Consumption Attitude and Behavior Intentions.*Journal of Consumer Marketing*, 25(1), 7-15.

Skinner, N.T. (2003). Birth Order Effects in Dominance: Failure to Support Sulloway's View.*Psychological Reports*, 92(2), 387-388.

Swinyard, R.W. and Sim, C.P. (1987).Perception of Children's Influence on Family Decision Processes.*Journal of Consumer Marketing*, 4(1), 25-38.

Tabachnick, B.G. and Fidell, L.S. (2012).*Using Multivariate Statistics* (6th Eds.). New Jersey: Pearson.

Talpade, S. and Talpade, M. (1995). Development of a Multi-item Scale to Measure Teenager Influence on Family Purchases: An Exploratory Study.*Journal of Marketing Theory and Practice*,3(4), 41- 45.

Wang, K-C, Hsieh, A-T, Yeh, Y-C.and Tsai, C-W. (2004). Whois the Decision Maker: The Parents or the Child in Group Package Tours*?Tourism Management*, 25(2), 183-194.