

EVOLUTION OF SPOUSES' AND CHILDREN'S DECISIONS ACROSS CULTURES

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SUMMARY:

The accumulation of family decision studies spanning decades allows us to summarize changes in decision influence within the family over time and culture, while controlling for other variables such as product user, product type and methodological issues. Results, based on 72 empirical studies over a 55 year period of time involving 40,012 participants, show that the husband's relative influence has decreased significantly since the mid twentieth century in favor of both wives and children in North America/Australia and Asia, but not in Europe. This article is an example of how meta-analysis can uncover trends that otherwise would have required expensive longitudinal panel studies.

KEYWORDS:

Family decision making, spouses, children

1. Introduction

While the influence of each family member in the decision making process has interested researchers for many years (Cotte and Wood, 2004), a gap exists in the literature concerning how members' roles in family decision making have changed over time. In recent decades, political, social, economic, and technological changes have impacted the family and family decision making has clearly been affected as well. For example, whereas earlier studies on family decision making mainly examined spousal interaction (Davis 1976; Sharp and Mott 1956; Wolgast 1958), more recently considerable importance has been placed on the role and impact of children in family decisions (Belch, Belch, and Sciglimpaglia 1980; Corfman and Harlam 1998; Flurry and Veeck 2009; Foxman and Tansuhaj 1988; Labrecque and Ricard 2001; Moschis and Mitchell 1986).

Societies vastly differ in terms of family composition as well as structure, values, norms, and behavior. Moreover, macro-changes have neither occurred in nor impacted in the same way every society and the evolution of family decision making has followed different patterns across the world (Ruth and Commuri 1998). For example, technological change in Western societies has allowed women to delay child bearing and earn significantly higher wages (Miller 2010). The positive impact of mother's going off welfare on pre-schoolers and young adolescents' mental health and behavior (Chase-Lansdale et al. 2003) is another example. Recent work has investigated income inequality across societies (Mulder et al. 2009). By contrast, the present paper focuses on the (inequality of) decision influence within families across societies and over time.

The accumulation of family decision making studies spanning decades provides a unique opportunity to examine the evolution of family members' roles in decision making. Past research has focused mainly on how the influence of each member of the family varies with the type of decision (Ganesh 1997; Shoham and Dalakas 2003), sub-decision (Darley and Lim 1986; Hopper 1995) or decision stage (Caruana and Vassallo 2003; Shoham and Dalakas 2003), with differing levels of influence reported across studies. The lack of analysis on how time has affected these results, coupled with the fact that few studies have considered variables that may moderate such influence (Ahuja, Capella, and Taylor 1998; Lachance, Legault, and Bujold 2000), pointed to the need for a more comprehensive understanding of participation in family decisions.

From a practical perspective, relative influence has obvious implications for targeting marketing efforts towards one or more family members involved in a particular decision. Understanding the relative strength of members' influence potentially could also guide marketing research data collection. For example, when collecting data about family decisions, a trade-off exists between interviewing more than one member in the family and getting more accurate information versus interviewing a single member (e.g., the one with the greatest influence in a particular decision), reducing time and cost. Methodologically, it is important to understand how study design decisions moderate the results in order to conduct the most informative and precise tests, accurately interpret research data, and develop effective study designs (Brown, Hoyer, and Inman 1998).

Here, we use meta-analysis to study the evolution of members' roles in family decision making. In addition to assessing the generalizability of relationships and how they evolve, meta-analysis can identify relationships that have not been assessed in the context of a single study and address important theoretical, practical, and methodological questions (Farley and Lehmann 1986). More specifically, we use meta-analysis to examine the evolution of and cross-cultural differences in family decisions making, along with the variables that influence the relative participation of each member of the family.

2. Determinants of members' influence in family decision making

Research on family decision making has developed in several ways. To assess the role of family members in the decision process, studies mainly have focused on the relative influence of the spouses in family decisions (Ganesh 1997; Martínez and Polo 1999; Stafford, Ganesh, and Garland 1996). Many articles have also examined children's influence in those decisions, although most of them only consider one child instead of all the children in the family (Ahuja et al. 1998; Geuens, Mast, and Pelsmacker 2002; Lachance et al. 2000). While some studies have analyzed the influence of only one member (Ahuja et al. 1998; Caruana and Vassallo 2003; Geuens et al. 2002; Lachance et al. 2000), others have focused on the influence of three family members: husband, wife and child (Belch, Belch, and Ceresino 1985; Holdert and Antonides 1997; Jenkins 1979; Labrecque and Ricard 2001; Ruiz de Maya 1994; Shoham and Dalakas 2003). Given these different approaches, it is not surprising that studies have found differences in members' influences in family decisions, along with a significant influence of product and decision related factors as well as parental and child characteristics.

How and why decision role structure varies over time in family decision making has received relatively little theoretical or empirical attention. Studies have shown changes in aspects of the family, such as economic inequalities between spouses (Teachman, Tedrow, and Crowder 2000) and spouses' share of housework (Amato et al., 2003). Research has also examined cross-cultural differences in family decision making, showing, for example, that less egalitarian and patriarchal societies foster less joint decision making and more husband dominance (Ford, LaTour, and Henthirne 1995). Here, we examine the impact of time and culture on influence in family decisions, while simultaneously examining other key determinants of spouses and children relative influence.

Time and Cultural Context

The role of spouses and children varies noticeably across cultures and countries. Relatively speaking, some cultures are more parent and male dominated than others. The differences between Western and Asian societies, for example, affect the role that children play in purchase decision making in families. In this regard, Qin, Pomeratz, and Wang (2009) recently showed that American children have made greater gains over time in decision making autonomy than Chinese children. Differences in economic development also contribute to differences in family decision making. In most wealthy economies, women with access to higher wages and rising life expectancy have increased their resources while reducing the time they traditionally devoted to children, which has given them more autonomy (Qin et al. 2009). Consequently we expect to see greater influence of wives and children in developed Western countries.

Cultures are not static. Macro-level changes (e.g., economic, social, or cultural forces) influence consumers in a society as well as the family decision making unit (Ruth and Commuri 1998). Cunningham and Green (1974) observed that in various product categories there was a shift between 1955 and 1974 in whether decisions were made autonomously or jointly between husbands and wives. Economic cycles may also have an influence. Lower children participation has been found for unemployed parents, who are more autocratic than employed parents (Sheldon and Fox 1983). Overall, there has been a trend toward a more important role for women as well as greater influence in the labor force (Golding, 2006). Based on this, we expect more recent studies will show a stronger role for wives and children in decision making, i.e., an evolution in the roles of family members in decision making.

Product Characteristics

Product category is the variable most used in research literature to explain members' influence in family decisions. Studies have found that a husband's influence is higher for decisions concerning products like cars (Belch et al. 1985; Bonfield 1978; Davis 1970; Martínez and Polo 1999; Qualls 1982; Shoham and Dalakas 2003; Shuptrine and Samuelson 1976; Wolgast 1958; Woodside and Motes 1979) and insurance (Bonfield 1978; Cosenza 1985; Jenkins 1979; Martínez and Polo 1999). On the other hand, a wife's influence is higher for decisions concerning products such as groceries (Bonfield 1978; Davis and Rigaux 1974; Jenkins 1979; Putman and Davidson 1987), her clothing (Cosenza 1985; Davis and Rigaux 1974; Martínez and Polo 1999; Putman and Davidson 1987), products for children such as toys (Bonfield 1978; Putman and Davidson 1987), clothes in general (Bonfield 1978; Davis and Rigaux 1974; Ford et al. 1995; Holdert and Antonides 1997; Putman and Davidson 1987), furniture (Davis 1970; Jenkins 1979; Shoham and Dalakas 2003; Shuptrine and Samuelson 1976), small appliances (Belch et al. 1985; Shoham and Dalakas 2003) and cleaning products and services (Davis and Rigaux 1974; Ford et al. 1995; Ganesh 1997; Wilkie, Moore-Shay, and Assar 1992). Other buying decisions appear to be made jointly by both spouses: buying a house (Davis and Rigaux 1974; Martínez and Polo 1999; Musinger, Weber, and Hansen 1975; Qualls 1982), the choice of vacations (Davis and Rigaux 1974; Filitrault and Ritchie 1980; Holdert and Antonides 1997; Martínez and Polo 1999; Putman and Davidson 1987; Qualls 1982; Shoham and Dalakas 2003; Stafford et al. 1996), and entertainment (Bonfield 1978; Davis and Rigaux 1974; Ford et al. 1995; Martínez and Polo 1999; Stafford et al. 1996).

Functional vs. Hedonic products. Although this variable has not been widely studied in research on family decision making (Kim and Morris 2007), there are advantages to considering products at a more abstract level. Hedonic products are consumed primarily for affective or sensory gratification purposes, while functional products deliver more cognitively oriented benefits (Woods 1960). Marketing information for these products can be processed differently by consumers. Affective responses often override cognitive structure in forming hedonic product attitudes, but not for functional products (Kim and Morris 2007).

Private vs. Public products. Recent investigation into reference group influence in consumer decision making has considered the conspicuousness of the product of interest (Bachmann, John, and Rao 1993; Grewal, Mehta, and Kardes 2004). Product conspicuousness is a function of two dimensions (Bearden and Etzel 1982). The first is the extent to which the product is owned by few, making it exclusive, and thus conspicuous. Luxuries, which are generally more exclusive than necessities, tend to be relatively more conspicuous. The second dimension is the degree to which product usage is performed in public versus in private. Publicly consumed items are more conspicuous than privately consumed products (Bachmann et al. 1993).

Analyzing the effect of the necessity/luxury nature of the product in our meta-analysis is difficult because what constitutes a luxury may vary across cultures and over time (Bachmann et al. 1993; Grewal et al. 2004). For example, a computer was a luxury in the 80's, but for many is now a necessity. Similarly a microwave oven may have been considered a luxury in the EEUU (Grewal et al. 2004), but is not in all European countries. Regardless, children (especially older children) are subjected to greater peer influence in public versus private products (Bachmann et al. 1993). Therefore, there may be differences in children's influence in family decision making depending on how visible the product is. More specifically, we expect children will have more influence on public (visible) products.

Family Characteristics

Wolgast's (1958) pioneering study on family decision making showed that with advancing age, and perhaps increased length of marriage, joint decision making declines. Since Davis's (1970) study of the role of demographic variables in family decision making, several studies have utilized these variables to explain members' influence in family decisions. Rigaux-Bricmont (1978) found that husband's education had an insignificant influence on their influence in family economic decision making. Interestingly, education is a passive resource (related to expertise) that, in some situations, needs only be possessed to exert influence in family decision making (Corfman and Lehmann 1987).

Demographics included in the analysis of children's influence in family decisions have produced very different results in terms of statistical significance, direction and magnitude (Jenkins 1979; Mehrotra and Torges 1977; Ruiz de Maya 1994). The child's age has been the variable most often considered. Most studies have found that older children have significantly more influence than younger ones (Ahuja et al. 1998; Darley and Lim 1986; Jenkins 1979; Lachance et al. 2000; Moschis and Mitchell 1986; Nelson 1979; Ruiz de Maya 1994; Ward and Wackman 1972).

Methodology

In order to assess differences in influence over time and cultures, it is important to control for the effects of other variables on influence. Based on theory and data availability (i.e., whether the variable is reported in published studies), we focus on four covariates: child participation in the study, informant, scale and publication outlet (whether the study has been published).

3. Method

To examine the effects of the above factors on family members' influence in decision making, a meta-analysis was conducted. Based on Krishna et al.'s (2002) classification, our approach to meta-analysis focuses on "the magnitude of the effect" (a.k.a. size of effect, i.e. the change in influence as an independent variable changes). Multiple steps were taken to develop a database of family member influence findings. Candidates for inclusion were empirical studies that quantified husband's, wife's and/or child's influence in family decision making. Studies were identified through keyword searches of electronic databases (ABI/Inform, Business Source Elite, Emerald, Proquest, Association for Consumer Research database, and Google Scholar) using family decision making, spouse's influence, husband and wife's influence, children's influence and family purchase as keywords. Searches of the references found in these studies as well as manual searches of the Journal of Consumer Research, Journal of Marketing Research, Journal of the Academy of Marketing Science, Journal of Business Research, Advances in Consumer Research, Psychology & Marketing and Young Consumers between January 1975 (or the first issue) and December 2010 were also conducted. Authors of unpublished papers were contacted as well.

Identified articles were then inspected for the presence of reported spouses' and children's influence measures. Articles that did not explicitly report this influence using scales or percentages were not included in the meta-analysis. As a result, a total of 72 studies were identified (see Appendix A). Since most papers examine multiple product categories, most yielded multiple observations. A total of 887 data points were obtained.

Dependent Variable

The literature has mainly used three types of measures to report husband's, wife's and child's influence in family decision making. A number of them utilize a one hundred point scale, where the influence of each member is a percentage of the overall influence in the decision (Ahuja et al. 1998; Filtrault and Ritchie 1980; Jenkins 1979; Lachance et al. 2000; Labrecque 2001; Ruiz de Maya 1994). Another group of studies focused on spouses' influence in family decisions used scales of three and five points ranging from husband decides to wife decides (e.g., Ganesh 1997; Martínez and Polo 1999; Stafford et al. 1996). Finally, a third group used either independent items for each member (ranging from never influential/no involvement/no input to always influential/heavy involvement/all of the input) or compared parents and children through one item (Beatty and Talpade 1994; Belch et al. 1985; Belch and Willis 2002; Darley and Lim 1986; Foxman and Tansuhaj 1998; Foxman et al. 1989a; Foxman et al. 1989b; Hall et al. 1995; Lachance et al. 2000; Nelson 1979; Shoham and Dalakas 2003).

To express overall influence in a given study, typically the percentages or points of influence are averaged across respondents, and the average percentage or the average of the scales is reported. In order to express all measures in the same metric, we transform 3 and 5 points bipolar (husband decides - wife decides) as well as three, four, five, six, seven, ten, eleven or twelve point scales into percentages, i.e., one hundred point scales. When each member of the family rated their own influence, we first rescaled the members' scores to

sum to one hundred and then calculated the percentage that each score represented. When the studies analyzed influence in sub-decisions or decision stages, we averaged the results across key aspects of the decision (e.g., when to buy, how much money to spend, what model, what color and where to buy) or only considered influence in the final decision stage.

Independent Variables

The influence scores and the measures associated with each determinant of the family member's influence were coded independently by two judges. Coding consistency was achieved in 94% of the instances, and the few discrepancies that occurred were resolved through discussions. Due to space restrictions, the coding scheme used for the research design determinants of members' influence is available from authors upon request.

4. Results

Simple effects

In order to see which variables determine the relative influence of the husband and the wife, we first completed a series of one-way ANOVAs, assessing the simple effect of the possible influences (uncontrolled for confounding with other variables). These ANOVAs used data weighted by the inverse of the variance of the influence, which is $p(1-p)/n$, where p is the husband's influence (wife's influence for the ANOVAs applied to the wife's influence data) in order to assign greater weight to the more precise studies (Sultan, Farley, and Lehmann 1990). Explained variance is assessed by the unadjusted R^2 in a linear regression.

Considering the first main focus of the paper, the impact of the year in which the study was published on family member's influence. A negative trend is quite clear for the husband's influence, while the wife and the child gain influence. Simple weighted regression analyses show a negative significant effect of time for the husband ($b = -.006$ (standardized $b = -.308$), $p < .001$, adj $R^2 = .09$), and significant positive effects for both the wife ($b = .006$ (standardized $b = .300$), $p < .001$, adj $R^2 = .09$) and the child ($b = .013$ (standardized $b = .476$), $p < .001$, adj $R^2 = .22$).

Concerning the second main focus of the paper, location of the sample, the results show that husband's and wife's participation does significantly vary geographically, with higher husband participation in Europe and North America/Australia (Tables 1, 2 and 3). In studies conducted in Asia, child's participation is higher than in studies conducted in North America/Australia and Europe.

Tables 1, 2 and 3 report average husband's influence, wife's influence and child's influence, respectively, for different levels of the covariates as well as the frequency of the covariates in the database for the 625 observations where spouses influence and the inverse of its variance could be calculated, and for the 303 observations containing available data about the child's influence and the inverse of its variance. The significance and the explained variances of corresponding ANOVAs are also reported. Influence varies

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considerably, ranging from 29.32 to 54.51 ($M = 37.50$) for the husband, from 38.16 to 68.16 ($M = 61.92$) for the wife, and from 3.47 to 56.49 ($M = 31.68$) for the child.

Husbands also exert higher influence for functional and private products. The average child's influence varies substantially across product categories, with the influence of children lower for functional and private products, consistent with expectations.

Concerning demographics, the husband's influence is higher when he is under 40 and similar in age to the wife (the age difference is less than three years). One interpretation of this is that members' influence evolves within a family, with the husband gradually losing influence. A Bonferroni test indicated that husband's influence is significantly lower when his level of education is high compared to low ($p < .05$). In addition, the husband's influence in family decision making is lower when wife's education is high rather than low ($p < .05$) or medium ($p < .05$). Opposite results are found for wife's influence. A child's age is positively associated with influence, with teenagers having more influence than younger children.

Research design characteristics also seem to affect the results. Those studies that also assess a child's influence report lower influence for the wife. Interestingly, data published in journals or books report higher wife's influence. Questionnaire informant also significantly affects reported wife's and child's influence as scale does. Whether these effects are real or illusory and due to other omitted variables is not clear. Fortunately, their purpose here is only to serve as covariates to reduce the likelihood that the results concerning time and culture are due to omitted variables.

Insert Table 1 about here

Insert Table 2 about here

Insert Table 3 about here

Multivariate Analysis

The significant results of time and geographic area found in previous analyses did not take into account interaction effects and collinearity (confounds) among the predictors. Moreover, while the use of multiple observations from a single manuscript is common in meta-analysis (Brown and Stayman 1992; Cox et al. 1997; Farley and Lehmann 1986; Szymanski and Henard 2001), it may result in correlated errors across observations. To control for this, we included dummy variables representing the studies. This allows us to see whether some studies found unusually large or small influence for some family members, suggesting it was driven by unique characteristics of the observations. Moreover, we included the two- and three-way interactions among time period, location and product category. Only some of those interactions could be examined for the child's influence regression, as there were empty cells for some combinations of variables.

The three regressions are statistically significant and the results are generally consistent with the variable-by-variable results of Tables 1 to 3. The most interesting result is the

negative interaction of year and location. The husbands' loss of influence during the last 55 years has occurred mainly in North America/Australia and Asia, with no significant change in Europe. Opposite results show up for wives and children.

5. Discussion

We utilized meta-analysis to assess the evolution of family members' influence in family decision making. Results show that influence depends on time and the cultural context of the sample, as well as product characteristics and methodological aspects of the study such as the scale used, the inclusion of children as participants, and whether the study has been published in a journal. More specifically, the husband's relative influence has decreased since the mid twentieth century, especially in North America/Australia and Asia, in favor of that of wives and children. Overall, these results show spouses are likely to make joint choices, consistent with seeking balance and equity in outcomes (Menasco and Curry 1989). In fact, in more than $\frac{3}{4}$ of the observations from both spouses, neither of them had more than 75% influence, with almost half of studies reporting participation in the 40-60% range for both spouses.

One interesting result is the significant effect of the year of publication of the study (or public availability if unpublished). Diminishing influence for husbands and increasing influence for wives and children highlights the change in spousal roles that has been taking place in Western societies. As Belch and Willis (2002) observed, husbands' and wives' roles in the family decision making process are changing. With more women working outside the home, contributing more to the financial resources of the family, and improving their education and social standing, the family decision making structure has changed as well. Overall, women have gained influence in almost every area of the family decision making process (Belch and Willis 2002). Moreover, while recent changes in societies (especially in western societies) are providing economic resources and greater status to women that favor her influence, they also provide information resources to husbands on products related to cooking and the household that may make them more influential in traditional solo-wife or wife-dominant decisions (Ruth and Commuri 1998).

Data from international studies and agencies provide partial explanations for the differences in the evolution of husbands' and wives' influence. Fuwa and Cohen (2007) report greater relative participation of husbands in housework for USA and Australia than for most European countries. Additionally, Stier and Mandel (2009) report a much higher proportion of dual-earner households in USA and Canada than in most European countries. Moreover, based on data from the last decade, Eurostat (ec.europa.eu/eurostat) reports a higher index of "Women per 100 men graduating" in the USA than in Europe. These findings are consistent with, and offer a quantitative explanation for, the changed roles of spouses in joint decisions in this geographical area.

There are at least three important limitations to this meta-analysis. First, its results depend on the population of which the 836 observations are representative. To the extent that specific culture/country, involvement and usage situations are not included in the sample, the results are limited. For example, according to US Government statistics, children now compose a smaller percentage of the population than they did in the past. More children are

living in single-parent families, often headed by a never-married parent. The impact of single vs. dual parents (and 1 vs. 2 career) households on family decision making could not be analyzed due to the lack of studies which focus on this. The second main limitation is driven by the varieties of methodologies used in previous studies. Many studies could not be used since either the dependent measures obtained relate to frequency of influence (e.g., Ward and Wackman 1972), did not provide information about the average influence of family members (e.g., Moschis and Mitchell 1986), or also included the influence of friends, relatives, neighbors, experts or sales-persons (e.g., Lee and Beatty 2002). A third limitation is the collinearity (confounding) among the variables. This both points to the need for multivariate analysis and makes such analysis difficult. Future studies may want to select designs to reduce the collinearity evident in the database (Farley, Lehmann, and Mann 1998).

In summary, there are three main contributions of this study to the literature on family decision making. First, we use an overall index of relative influence to compare results across the studies carried out on this topic over the last fifty five years. Second, this is the first study that analyzes the evolution of members' influence in family decision making while accounting for cultural differences. Third, this article is an example of how meta-analysis can be used to uncover trends that otherwise would have required expensive panel studies. Hopefully the results here will both spur additional empirical work and work centered on theoretically explaining the general process that leads to these results.

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TABLE 1
EFFECTS OF RESEARCH DESIGN CHARACTERISTICS ON HUSBAND'S INFLUENCE IN FAMILY
DECISION MAKING

Independent Variables	Number of observations	Average husband's influence (%)	F _(m,n) ^a	Explained variance
<i>Year</i>				
1955-1995	364	51.57	61.152 _(1,623) ***	.088
1996-2010	261	33.85		
<i>Location of the sample</i>				
North America and Australia	393	42.99	8.451 _(3,621) ***	.035
Asia	118	33.43		
Europe	100	43.51		
Latin America	14	38.13		
<i>Functional/Hedonic product</i>				
Functional products	401	44.97	55.746 _(1,621) ***	.081
Hedonic products	222	31.14		
<i>Private/Public product</i>				
Private products	432	42.72	35.657 _(1,621) ***	.053
Public products	191	31.51		
<i>Husband's age</i>				
≤ 40	242	45.79	13.847 _(1,385) ***	.032
>40	145	35.89		
<i>Wife's age</i>				
≤ 40	307	34.85	.020 _(1,408)	.002
>40	103	34.45		
<i>Older husband</i>				
0-2	204	43.85	18.510 _(1,381) ***	.044
3-6	179	33.63		
<i>Child's age</i>				
Up to 12	27	35.49	0.369 _(1,45)	0
13-18	20	32.79		
<i>Husband's education</i>				
Low	48	48.49	15.010 _(2,365) ***	.071
Medium	103	54.51		
High	217	37.29		
<i>Wife's education</i>				
Low	48	48.49	16.842 _(2,365) ***	.079
Medium	171	49.02		
High	149	33.79		
<i>Differences between husband's and wife's education</i>				
No	302	40.67	1.286 _(1,368)	.001
Yes	68	44.24		
<i>Child assessment in the study</i>				
No	570	37.55	.090 _(1,623)	.001
Yes	55	35.94		
<i>Informant</i>				
Child	4	29.32	1.685 _(3,597)	.003
Husband	140	47.01		
Wife	219	41.60		
One of the spouses or Family together	238	43.85		
<i>Scale</i>				
100	56	42.45	0.434 _(2,622)	.648
3 or 5 points (husband decides – wife decides)	540	37.31		
4 or 6 points (one item per member)	29	38.78		
<i>Publication outlet: Journal</i>				
No	31	42.62	.269 _(1,623)	.604
Yes	594	37.45		

^a Statistical significance assessed through ANOVAs when husband's influence in purchase decision is the dependent variable

*** $p < .01$ level; ** $p < .05$ level; * $p < .1$ level

EVOLUTION OF SPOUSES' AND CHILDREN'S DECISIONS ACROSS CULTURES

TABLE 2
EFFECTS OF RESEARCH DESIGN CHARACTERISTICS ON WIFE'S INFLUENCE IN FAMILY
DECISION MAKING

Independent Variables	Number of observations	Average wife's influence (%)	F _(m,n) ^a	Explained variance
<i>Year</i>				
1955-1995	364	46.78	70.549 _(1,623) ***	.100
1996-2010	261	65.84		
<i>Location of the sample</i>				
North America and Australia	393	56.51	8.829 _(3,621) ***	.036
Asia	118	66.09		
Europe	100	55.04		
Latin America	14	61.86		
<i>Functional/Hedonic product</i>				
Functional products	401	54.59	52.690 _(1,621) ***	.077
Hedonic products	222	68.16		
<i>Private/Public product</i>				
Private products	432	56.73	34.739 _(1,621) ***	.051
Public products	191	67.88		
<i>Husband's age</i>				
≤ 40	242	53.80	13.342 _(1,385) ***	.031
>40	145	63.53		
<i>Wife's age</i>				
≤ 40	307	65.07	.004 _(1,408)	.002
>40	103	64.88		
<i>Older husband</i>				
0-2	204	55.85	16.545 _(1,381) ***	.039
3-6	179	65.56		
<i>Child's age</i>				
Up to 12	27	44.17	1.958 _(1,45)	.020
13-18	20	40.06		
<i>Husband's education</i>				
Low	48	51.51	18.263 _(2,365) ***	.086
Medium	103	43.53		
High	217	62.51		
<i>Wife's education</i>				
Low	48	51.51	18.764 _(2,365) ***	.088
Medium	171	49.95		
High	149	66.04		
<i>Differences between husband's and wife's education</i>				
No	302	58.66	.986 _(1,366)	0
Yes	68	55.54		
<i>Child assessment in the study</i>				
No	570	62.57	14.775 _(1,623) ***	.022
Yes	55	40.98		
<i>Informant</i>				
Child	4	39.47	3.332 _(3,597) **	.012
Husband	133	53.10		
Wife	226	58.14		
One of the spouses or family together	238	51.19		
<i>Scale</i>				
100	56	49.15	5.302 _(2,622) ***	.014
3 or 5 points (husband decides – wife dedides)	540	62.64		
4 or 6 points	29	47.42		
<i>Publication outlet: Journal</i>				
No	31	38.16	5.296 _(1,623) **	.007
Yes	594	62.13		

^a Statistical significance assessed through ANOVAs when wife's influence in purchase decision is the dependent variable
*** $p < .01$ level; ** $p < .05$ level; * $p < .1$ level

EVOLUTION OF SPOUSES' AND CHILDREN'S DECISIONS ACROSS CULTURES

TABLE 3
EFFECTS OF RESEARCH DESIGN CHARACTERISTICS ON CHILDREN'S INFLUENCE IN FAMILY DECISION MAKING

Independent Variables	Number of observations	Average children's influence (%)	F _(m,n) ^a	Explained variance
<i>Year</i>				
1955–1995	141	18.62	74.266 _(1,301) ***	.195
1996-2010	162	43.63		
<i>Location of the sample</i>				
North America and Australia	167	19.21	80.277 _(2,300) ***	.344
Asia	55	56.49		
Europe	81	26.26		
Latin America				
<i>Functional/Hedonic product</i>				
Functional products	140	20.83	64.087 _(1,290) ***	.178
Hedonic products	152	45.00		
<i>Private/Public product</i>				
Private products	177	27.61	10.684 _(1,287) ***	.033
Public products	112	38.79		
<i>Husband's age</i>				
≤ 40	17	28.38	0.602 _(1,123)	0
>40	108	33.34		
<i>Wife's age</i>				
≤ 40	66	26.01	1.174 _(1,155)	.001
>40	91	30.01		
<i>Older husband</i>				
0-2	75	34.41	0.953 _(1,123)	0
3-6	50	30.60		
<i>Child's age</i>				
Up to 12	135	20.88	48.406 _(1,282) ***	.143
13-18	149	42.54		
<i>Husband's education</i>				
Low			1.364 _(1,108)	.003
Medium	45	29.80		
High	65	34.67		
<i>Wife's education</i>				
Low			0.567 _(1,136)	0
Medium	49	29.16		
High	89	32.25		
<i>Differences between husband's and wife's education</i>				
No	106	33.06	1.267 _(1,108)	.002
Yes	4	17.21		
<i>Informant</i>				
Child	99	38.41	22.623 _(3,272) ***	.191
Husband	40	14.74		
Wife	58	12.09		
One of the spouses or family together	79	28.83		
<i>Scale</i>				
100	34	3.47	101.256 _(2,300) ***	.400
3 or 5 points (parent(s) decides – child decides)	218	45.08		
3, 4, 5, 6, 7, 10, 11 or 12 points (one item per member)	51	25.94		
<i>Publication outlet: Journal</i>				
No	14	23.81	.429 _(1,301)	.002
Yes	289	31.82		

^a Statistical significance assessed through ANOVAs when child's influence in purchase decision is the dependent variable

*** $p < .01$ level; ** $p < .05$ level; * $p < .1$ level