

Empirical Validation of the Relationship between Sustainable Involvement and Family Purchase Behavior

Nadira Bessouh¹ and Yamina Grari²

¹ University of Tlemcen-Algeria

Received: 12 December 2017 Accepted: 4 January 2018 Published: 15 January 2018

Abstract

The present research aims to explain how sustainable involvement can influence the behavior of Algerian families for the purchase of a new car. The main hypothesis of this study was tested on a sample of 210 families. The data obtained were analyzed using structural equation models. The principal results that emerged from this investigation show that the identification of the cognitive and/or emotional purchase process, adopted by family members, could be a relevant avenue for companies to develop and enhance their products. The findings obtained could offer an opportunity to create strong and durable brands.

Index terms— Family structure; Decision-making process; Sustainable involvement.

1 I. Introduction

Understanding and explaining the actions of family members in buying or consuming situations represent some of the most fruitful areas of marketing, as previously reported by numerous theoretical and empirical studies. The ever-increasing interest expressed by researchers around the world in explaining this theme is due to the centrality of the family in the marketing strategy of any company. This is also the view of Bree (1992) who considers the family as the main unit of consumption. Other authors, such as Avis & Rigaux (1974) and Sherfi (2010), pointed out that accurate, in-depth and exhaustive studies on family purchase are rare; some were only conducted under a single, essentially individual angle. Yet buying and consuming decisions are usually made by a group of people, particularly members of the family unit. In addition, research conducted by the Credoc (an institution that specializes in statistical, economic and sociological studies) indicates that families today tend to manage their resources in time, money and physical effort in a rigorous and effective manner. It is therefore easy to understand the interest of manufacturers and car dealers in knowing the family buying process so that they can invest in strategies that help them control and manipulate the behavior of family members in a way that is favorable to them. It is therefore essential to study the process of family purchasing, knowing that there is no typical decisionmaking approach by which each family member must pass before buying a product; there is a multitude. Indeed, some members go through a lengthy decisionmaking process, involving many steps; while others need only two or even three steps in the decisionpurchase procedure. It is worth noting that family decision-making involves several steps that depend on the type of products to be purchased, the buying habits of those products, and the circumstances of purchase. All this justifies our choice for this fundamental subject who, in our opinion, has not been sufficiently explored (the Algerian academic literature relative to the subject of family purchase is very poor and almost absent) (Bessouh et al, 2017; Bessouh and Omar Belkhir, 2018a). This is one of the reasons that led us to clarify the gray areas related to the complex behavior of family purchase. The family purchase approach that is adopted in the present study is based on three types of behavior that can illustrate and clarify the buying process, namely:

Cognitive Behavior that relates to product knowledge; it involves information seeking (Cooper, 1983);

Affective Behavior which represents all positive and negative feelings about the product (Lekoff -Hagius and Mason, 1993); Conative Behavior that lies in intention, decision-making and the act of purchase (Filser, 1994).

The present study takes into account sustainable involvement, and attempts to adapt the P.I.A scale, proposed by Strazzieri (1994), to the Algerian context. It provides an efficient tool to analyze and better understand the purchasing behavior of members within the Algerian family. An attempt is therefore made, through this research, to answer the following problematic:

2 How does sustainable involvement influence the buying behavior of members of the Algerian family to buy a new car?

To study this problematic, it was decided to consider a hypothesis that can be subdivided into three other sub-hypotheses. This presentation stems from the fact that our issue deals with the subject of purchase behavior within the family triad (father, mother and child) U for the purchase of a new car. The research hypothesis may therefore be stated as follows:

H1: Sustainable involvement of one of the family members in the purchase of a car has an impact on his behavior. H1.1: A causal link exists between the sustainable involvement of the father and one of the cognitive, affective and conative behaviors when buying a car.

3 H1.2:

A causal link exists between the sustainable involvement of the mother and one of the cognitive, affective and conative behaviors when buying a car.

4 H1.3:

A causal link exists between the sustainable involvement of the child and one of the cognitive, affective and conative behaviors when buying a car.

5 Figure 1: Conceptual Model of Research

This study begins with a review of the literature that identifies the variables driving family purchases. Next, the methodology used in collecting and processing the data is presented; the interpretation of the results obtained is given at the end.

6 a) Review of the literature on family purchasing behavior and sustainable involvement i. Family Buying Behavior

The decision-making theory within the family has significantly evolved (Riley, 2012; Bessouh et al, 2016). It has shifted from unilateral decision-making to a more hybrid, more collective and complex decision that involves both individual and collective decisions. Indeed, before 1950, the perspective that prevailed in research on the purchase behavior was that the husband, as head of the family, unilaterally took all decisions concerning his family (Tissier-Desbordes, 1982; Putman & Davidson, 1987 ?? Bessouh et omar Belkhir, 2018b). Over time, this attitude has been superseded by the popular concept of the woman as "the buying agent" of the family (Davis, 1976). This concept, which may obviously be verified through the observation of this new characteristic, associates, perhaps incorrectly, the act of purchase with the responsibility and authority to make purchasing decisions within the family. These two approaches are based on the belief that one, and only one person, is responsible for making all decisions in the family. Moreover, the family unit has become the focus of many purchase decisions as each spouse tries to adapt as much as possible to the buying and consuming customs and habits of the other. In addition, the purchases made by children are directly or indirectly influenced by the parents. It therefore seems rather artificial to analyze the purchase and consumption decisions independently of the context that created them. It is urgent to understand the two actions of buying and consuming because they are part of the lifestyle of households. To be understood, these activities require a good knowledge of how tasks are identified and responsibilities are assigned within the family.

7 ii. Impact of involvement on the purchase decision

Involvement was initially developed in several social psychology studies, particularly with the founding works of Sherif and Cantril (1947), as well as those of Sherif and Hovland (1961), within the framework of social judgment theory. For these authors, involvement is "the perceived importance with which an individual establishes a relationship with some aspects of his world". Later, in 1967, Krugman introduced this concept into marketing. For him, involvement is primarily a way of reacting to advertising. In addition, involvement expresses the level of interest that the consumer puts on a product or service. The degree of involvement depends on the consumer's profile, as well as on the type of product or service, perceived situation and level of perceived risk. On the other hand, Mitchell (1992) believes that involvement is the main element that influences the level of stimulation, interest, or impulse. Bloch (1982) defined involvement as a personal and determining variable in the consumer's affective relationship with the product. It significantly affects the consumer's behavior and purchase decision. It is important to distinguish between sustainable involvement and situational implication, and between cognitive implication and emotional implication, in order to better understand the purchase behavior of the consumer.

Therefore, motivation and involvement level are very important factors; the efforts made by the consumer through his decision-making process depend on these factors. This research work attempts to examine the temporal aspect of involvement. Sustainable involvement is thus studied due to its

The figure below illustrates the path adopted in this study.

Sustainable Involvement / Car COGNITIVE AFFECTIVE CONATIVE importance. Moreover, a great number of researchers in the field of marketing give it considerable importance when studying the consumer's behavior.

8 II. Methodology of Empirical Research

The test used to validate the research hypotheses leads us to adopt a research method that makes better use of the data collected. The relevance of this method depends on the choice of the sample, the measurement scales used, and the processing of the questionnaire. The results obtained are then analyzed in order to confirm or refute the hypotheses. To better understand the purchase decision within the family when buying a car, a questionnaire was sent to 210 nuclear families.

9 a) Choice of the Sample

Our survey was conducted with a sample of 210 families, consisting of both parents and at least one teenager between 12 and 19 years old, residing in the Wilaya of Tlemcen. The constitution of the sample was one of the key stages of the present research. It was decided that the data collection instrument is a selfadministered questionnaire, which was distributed to all three family members in November of the year 2016.

10 b) Scales of Measurement

The objective of this study is to empirically test the measurement scales and then compare their psychometric qualities in order to determine which of them is capable of keeping the factor structure validated in the theory (Akremi, 2005). The questionnaire, whose purpose is to measure the latent variables constituting our theoretical model, consists of two parts; the first one covers the following four nominal variables, namely sustainable involvement (IMPL), cognitive behavior (COG), affective behavior (AFF) and conative behavior (CON), and the second one is composed of the items that make up the measurement variables. The distribution of items is presented in Appendix 1.

Through this questionnaire, the respondents were asked to give their opinion on the progress of the purchase process of a new car and to specify their degree of agreement or disagreement on a scale of Likert which consists of 5 points. It is important to note that the items selected in this study were taken from the literature review on family purchase, while the others were developed specifically for analysis. For the processing of collected data, the English variant of SPSS version 20.0 and STATISTICA version 12.0 were used.

11 III. Results of the Study a) Exploratory Data Analysis

The assessment of scale reliability makes it possible to statistically determine the parameters that should be released in order to appreciably improve the adjustment quality of the measurement model. The number of dimensions can be determined using two separate and complementary tools, namely the Principal Component Analysis and Cronbach's Alpha coefficient, which allow checking the reliability of the dimensions identified. However, this complementarity finds its own limits during the successive iterations of these two tools. Source: Developed by the authors using the software SPSS20.0 Software (Sample of 210 Families)

The Cronbach's alpha of the long-term commitment scale is excellent (>0.9), which reveals good internal consistency. The alphas for each factor are also good (they range from 0.830 to 0.939). The KMO values are all greater than 0.7, confirming the results obtained with Cronbach's alpha. Bartlett's sphericity test is significant, and communities are high (>0.5), except for Item VCON7, in the mother and adolescent measurement scales, for which there is a weak community rate.

12 b) Confirmatory Factor Analysis

To test our theoretical model, a confirmatory factor analysis was carried out using the structural equation model. The questionnaire data were processed using the software Statistica 12.0. The purpose sought is to verify and validate the unidimensionality, reliability and factorial contributions of the constructs by means of the confirmatory factor analysis. The results of adjustment of the measurement model and structural model are summarized in Table 2. Note that sequential chi-square difference tests were carried out to ensure the discriminant validity of each variable, and to check the degree of freedom.

13 c) Model Fit Evaluation

The adjustment indices are generally good, whether they are classical statistics that are calculated on the values of the sample (GFI, AGFI, CFI, NFI, RMR) or even model adjustment indices, such as the Population Gamma Index (PGI), Adjustment Population Gamma Index (APGI) and RMSEA. These indicators make it possible to evaluate only the quality of the model in absolute terms, but do not stipulate, in any case, the rejection of

the model. Therefore it becomes possible to confirm that the fit is good, and that the estimated values and those observed empirically are close to each other. Therefore, one can say that the studied constructs of the measurement and structural models have acceptable results. Despite the existence of some values lower than the ones recommended by a number of researchers in the field (Fox, 2006, Hu & Bentler, 1999), one can say that the adjustment indices are rather satisfactory. According to Ping (1995), the results obtained do not preclude performing the advanced hypothesis testing. The factorial contribution allows measuring the factorial weight of manifest variables (indicators or items) on the latent variables of a theoretical model. Thus, the Student's t-test must statistically be greater than 1.96, with a 5% significance level for each factorial contribution of indicators related to a construct in order to check if the relation between items is positive. The contributions of each item are around the value 0.6, except for VCON 5-6-7 of the father.

The values of λ are satisfactory and important, which means that a significant link exists between each indicator and its construct. Factor analysis indicates that there is a strong correlation between the explanatory variable and the explained variables of the structural model. It is therefore possible to say that sustainable father involvement has a positive influence on his behavior for buying a car. The hierarchy of effects for the father's buying process for this product category follows a thoughtful process ($\lambda_{\text{cog}} = 0.892$). These results are in good agreement with those reported by Cooper (1983) and Kaplan (2000). The factorial correlations between the latent variables of the structural model show satisfactory scores, which means that the mother is also involved in the car purchase process. She has a rather emotional behavior ($\lambda_i = 0.825$). Since the factorial weight of the conative behavior ($\lambda_i = 0.731$) and that of the cognitive behavior ($\lambda_i = 0.718$) are quite close to each other, it is difficult to decide on the hierarchy of effects for the mother's buying process. The adolescent's purchasing process for such products is divided between a positive feeling vis-à-vis the products considered and a rigorous search for information before proceeding to the act of purchase ($\lambda_i > 0.50$).

14 e) Correlations and Modeling of Structural Equations

15 IV. Conclusion

Family buying behavior remains a poorly explored topic in Algeria. As part of this research, we have drawn from several studies that highlight the leading role of sustainable involvement to explain the hierarchy of effects of individuals in the same household during the family purchase decision-making process. Involvement certainly has consequences, for all the cognitive, affective and conative behaviors mentioned above, on each member of the household. According to the results obtained in this study, it is easy to see that the analysis of the role structure in Algerian families reveals divergences in the decision-making process. It is on this basis that we can, therefore, make two recommendations: -Companies must continually seek out new and better ways of offering their products or services. This is the only way they can successfully maintain their competitive edge and remain at the forefront of business innovation.

1

Variable	K	M	O	Father		Mother		Child		Household
				λ	Total Variance	λ	Total Variance	λ	Total Variance	
VIMP	0.838	0.933		0.816	75.069	0.926	73.469	0.864	82.009	0.000
VCOG	0.888	0.945		0.852	75.274	0.912	65.124	0.907	77.140	
VAFF	0.739	0.834		0.719	60.700	0.819	60.224	0.841	69.390	
VCON	0.750	0.814		0.834	55.150	0.878	64.157	0.859	74.205	

Figure 1: Table 1 :

¹© 2018 Global Journals Empirical Validation of the Relationship between Sustainable Involvement and Family Purchase Behavior

²© 2018 Global Journals 1

2

Absolute Adjustment Indices					Absolute Adjustment Indices				
Indices		Value	Value	Value	Indices		Value	Value	Value
		Fa-ther	Mother	Child			Fa-ther	Mother	Child
Chi_2		1228.29	1153.64	1667.2	Bentler-Bonett		0.760	0.804	0.650
Degree of freedom	DF	272	272	272	Normed Fit Index				
Level p		0000	0000	0000	Bentler-Bonett Non-Normed Fit Index		0.781	0.825	0.655
RMS	Standardized	0.0999	0.0927	0.143	Bentler Comparative Fit Index		0.801	0.842	0.688
residues					Bollen's Rho		0.735	0.784	0.614
(GFI). Joreskog		0.651	0.671	0.561	Bollen's Delta		0.802	0.843	0.689
(AGFI). Joreskog		0.583	0.607	0.475	Parsimonious Fit Indices				
Population Noncentrality Parameter		5.398	5.385	8.480	James-Mulaik-Brett Parsimonious Fit Index		0.689	0.729	0.589
Mc Donald Noncentrality Index		0.067	0.089	0.014	Ch2 /DF		4.515	4.24	6.129
RMSEA	Index Steiger-Lind	0.141	0.133	0.177					
Gamma Population Index		0.720	0.744	0.616					
Adjusted Population Gamma Index.		0.666	0.694	0.541					

[Note: Source: Elaborated by the authors using the software Statistica 12.0 (Sample of 210 families)]

Figure 2: Table 2 :

3

Year

4

Volume

XVIII

Issue

IV

Ver-

sion

I

()

Global	Car	S	-2.564	Father	0.235	S	-0.112	Mother	-1.257	Adolescent	-0.499	S	-0.988	K
Jour-	Variables		-2.151	Fa-	0.075		0.075	Mother	0.22					
nal of	VIMP	1	-2.127	ther	0.153		0.153		-1.272					
Man-	VIMP	2	-2.091		0.260		0.260		-1.112					
age-	VIMP	3	-1.629		0.261		0.261		-1.221					
ment	VIMP	4	-1.244		-0.030		-0.030		-1.016					
and	VIMP	5	-1.797		-0.063		-0.063		-0.574					
Busi-	VIMP	6	-2.576		-0.394		-0.394		-0.906					
ness	VCOG	1	-1.676		0.643		0.643		-0.848					
Re-	VCOG	2	-1.644		0.690		0.690		-0.636					
search	VCOG	3	-1.721		0.447		0.447		-0.648					
	VCOG	4	-1.522		0.596		0.596		-0.795					
	VCOG	5	-1.930		-0.203		-0.203		-0.825					
	VCOG	6												
	VCOG	7												
	Car													
	Variables	S		K		S		K		S			K	
	VAFF 1	-2.456		0.253		-0.488		-0.794		-0.824			-	0.348
	VAFF 2	-1.155		0.777		0.697		-0.390		-0.188			-	1.233
	VAFF 3	-0.612		-0.478		0.880		-0.358		0.270			-	1.267
	VAFF 4	-1.211		0.900		0.027		-1.175		-0.285			-	1.133
	VAFF 5	-0.305		-1.335		0.654		-0.751		0.469			-	1.113

Figure 3: Table 3 :

4

Relations	η^2	E_i	$T > 1.96$	η^2	E_i	$T > 1.96$	η^2	E_i	$T > 1.96$	$P < 0.05$
(VIMP)- >(VCOG)	0.892	0.205	50.350	0.718	0.484	19.533	0.758	0.425	23.889	
(VIMP)- >(VAFF)	0.867	0.248	34.614	0.825	0.319	26.657	0.823	0.323	29.522	0.00
(VIMP)- >(VCON)	0.602	0.638	12.120	0.731	0.466	19.773	0.629	0.604	14.167	

Source: Elaborated by the authors using the software Statistica 20.0 (Sample of 210 fa

Figure 4: Table 4 :

				purchase satisfaction; it must also aim to satisfy the 2			
(VIMP)?[vimp2]	0.949	102.53	0.812	consumer's pleasure during the consumer	31.616	0.920	
(VIMP)?[vimp3]	0.809	31.659	0.847	experience.	38.908	0.905	64.250
(VIMP)?[vimp4]	0.897	58.483	0.895		55.221	0.920	74.848
(VIMP)?[vimp5]	0.703	19.179	0.914		64.666	0.910	67.107
(VIMP)?[vimp6]	0.705	19.317	0.631		14.520	0.809	31.968
(VCOG)?[vcog1]	0.743	22.708	0.663		16.529	0.802	31.263
(VCOG)?[vcog2]	0.820	33.568	0.431		7.481	0.640	15.306
(VCOG)?[vcog3]	0.929	79.862	0.948		101.14	0.961	140.46
(VCOG)?[vcog4]	0.831	35.870	0.957		112.99	0.949	115.30
(VCOG)?[vcog5]	0.915	68.752	0.806		31.378	0.937	96.607
(VCOG)?[vcog6]	0.802	30.384	0.880		51.346	0.922	80.182
(VCOG)?[vcog7]	0.856	42.363	0.516		9.915	0.711	20.182
(VAFF)? [vaff1]	0.825	29.922	0.515		9.280	0.757	23.727
(VAFF)? [vaff2]	0.856	34.639	0.837		29.957	0.860	38.026
(VAFF)? [vaff3]	0.631	13.691	0.811		26.754	0.798	27.411
(VAFF)? [vaff4]	0.666	15.529	0.625		13.275	0.829	32.086
(VAFF)? [vaff5]	0.473	8.155	0.604		12.353	0.687	17.167

Figure 5:

There is a 99% chance for me to make purchases ??CON 3 There is a 99% chance that I will make the purchase
 ??CON 4 I am probably going to carry out the purchase. ??CON 5 There is very little chance that I will not
 buy a car myself ??CON 6 It is in my interest to buy a car VCON 7
 There is very little chance that someone else in my family decides to buy a car

[Bessouh] , N Bessouh .

[Ping ()] 'A parsimonious estimating technique for interaction and quadratic latent variables'. R Ping . *Journal of Marketing Research* 1995. 32 p. .

[Bessouh. N, Omar Belkhir. D Arzi. F ()] 'A Participation of Algerian Members in the Decision Process of Purchasing Food Products'. *Journal of Marketing and Consumer Research .In international peer reviewed journal. ISSN 24228451* Bessouh. N, Omar Belkhir. D & Arzi. F (ed.) 2018a. p. .

[Riley (2012)] *Buyer behavior-The decisionmaking process*, J Riley . http://tutor2u.net/business/marketing/buying_decision_process.asp Accessed on 7 2012. January 2015.

[Consommateur » édition 3-Dunod] *Consommateur » édition 3-Dunod*, (Paris) p. 104.

[Hu and Bentler ()] 'Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives'. L Hu , P M Bentler . *Structural Equation Modeling* 1999. 6 (1) p. .

[Davis (1976)] 'Decision Making Within Household'. H L Davis . *Journal of Consumer Research* 1976. March. 2 p. .

[Bessouh (2016)] 'Effects of Family Roles on the Purchase Decision Process: Empirical Evidence from Algeria'. N Bessouh . *International Journal of Research in Finance and Marketing (IJRFM)* 2016. October. 6 p. . (Issues)

[Putman and Wr ()] *Family purchasing decision: family roles by product category. Colombia Management Horizon*, M Putman , Davidson Wr . 1987.

[Filser ()] M Filser . *Le Comportement du Consommateur*, (Paris) 1994. Dalloz.

[Krugman ()] H F Krugman . *The Measurement of Advertising Involvement*, 1967. 1967. 1983. 30. (cite par Kapferer et Laurent)

[Soufiane ()] *L'influence des paramètres socioculturels dans la décision d'achat de la famille Françaises d'origine Maghrébine*, Sherfi Soufiane . 2010. Doctorat en sciences de gestion .Université d'Artois (Thèse de)

[Joel ()] *Le Comportement du*, Bree Joel . 2012.

[Lefkoff-Hagius R. And and Mason ()] C H Lefkoff-Hagius R. And , Mason . *Characteristics Beneficial, and Image Attributes in Consumer Judgments of Similarity and Preference*, 1993. 20 p. .

[Davis] 'P (1974) « Perception of Marital Poles in Decision Process Uses'. Rigaux H B Davis . *Journal of Consumer Research* 1 (1) p. .

[Strazzieri ()] A Strazzieri . *Mesurer L'implication durable vis-à-vis d'un produit indépendamment du risque perçu*, (RAM, 7, 1) 1994. p. .

[Ee ()] 'Structural Equation Modeling'. Rigdon Ee . *Modern Methods for Business Research*, Ga Marcoulides (ed.) (London) 1998. Lawrence Erlbaum Association. p. .

[Fox ()] 'Structural Equation Modeling with the Sem Package in R'. J Fox . *Structural Equation Modeling* 2006. 13 (3) p. .

[Kaplan ()] *Structural Equation Modeling: Foundations and Extension*, D Kaplan . 2000. Sage, Thousand Oaks, CA.

[Bessouh Nadira Djaoud Omar Belkhir ()] 'The Effect of Mood on Impulse Buying Behaviorcase of Algerian Buyers'. *Austin Journal of Business Administration and Management* Bessouh Nadira & Djaoud Omar Belkhir (ed.) 2018b. 2 (1) .

[Bessouh and Iznasni (2016)] 'The Purchase Decision Process within Algerian Families: Shadows and Qualitative Enlightening'. N Bessouh , Iznasni . *International Journal of Business and Management* 2016. May. IV (2) p. .

[Mitchell ()] 'Understanding Consumer's Behavior. Can Perceived Risk Theory Help?'. V-W Mitchell . *Management Science* 1992. 30 p. .

[Saidi and Belarbi ()] 'Women and the Purchasing Decision'. Saidi , A Belarbi . *British Journal of Marketing Studies* 2017. 5 p. .

[Cooper ()] '« A Review of Multidimensional Scaling in Marketing Research'. L G Cooper . *Applied Psychological Measurement* 1983. 7 p. .

[Akremi ()] '« Analyse des variables modératrices et médiatrices par les méthodes d'équations structurelles'. A Akremi . *Wacheux F. « Management des ressources humaines Méthodes de recherche en sciences humaines et sociales*», Edition De Boeck, P Roussel (ed.) (Belgique) 2005. p. . (1ère ed)

- 241 [Filser ()] « *Le Marketing Sensoriel: La Quête de l'Intégration Théorique et Managériale*, M Filser . 2003. p. .
242 (Revue Française du Marketing, 194, 4/5, Septembre)
- 243 [Tissier-Desbordes ()] « *Similarités de comportement de consommation entre les mères et leurs filles: application*
244 *aux produits d'hygiène-beauté* », thèse pour le doctorat en stratégie commerciale des entreprises, E Tissier-
245 Desbordes . 1982. Université de Paris IX-Dauphine
- 246 [Sherif and Hovland ()] « *Social Judgment: Assimilation and contrast Effects in communication and Attitude*
247 *change*, M Sherif , C L Hovland . 1961. 1994. New Haven CT: Yale University Press. (cite par Strazzieri)
- 248 [Sherif and Cantril ()] « *The psychology of ego-involvement*, M Sherif , H Cantril . 1947. New York, J: Wiley &
249 Sons.