An Investigation into Decision Styles of Mobile Phone Customers

Mohammad Ali Nasimi[1]
Department of Business Management, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

Somaye Amiri
Department of Business Management, Semnan University, Semnan, Iran

Samira Pali
Department of Business Management, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

Mohammad Hassan Nasimi
Department of Business Management, Bandar Lengeh Branch, Islamic Azad University, Bandar Lengeh, Iran

Samaneh Nasimi
Department of Business Management, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

Abstract

Customers relate to various markets with distinct decision making styles. Such styles may be somewhat time independent. The present study was conducted to take a thorough look at Sproles & Kendall's model of decision making styles among mobile phone customers, with a focus on store location, recommendations and criticism by others, and power of parents. To this end, it was attempted to develop a data collection instrument through the latest changes in the questionnaire for decision making model of purchase as well as experts' and consumers' comments and judgments. After the conduction of a random sampling, 385 questionnaires were handed out to mobile phone users out of which 369 were usable. In order to analyze the data and test the hypotheses, structural equations modeling was utilized. The results indicated that habitual and store location styles were the most important ones.

[1] *Corresponding author's email: ali_nassimi2002@yahoo.com*

Introduction

Everyday sees numerous purchase decisions by customers. Purchase decision is the critical point of marketing ventures. Various detailed studies by larger corporations try to answer what customer buy, where they go shopping, how much they buy, when they buy, and why they buy (Kotler & Armstrong 2011: 133).

In the majority of studies, the presumption is that every single customer draws upon specific features of decision making. Such features are called Consumer Decision Making Styles (Walsh et al. 2001). Today, the study of consumer decision making styles has a particular place in the literature of consumer behavior. Such studies started to draw the attention of researchers in 50s. A consumer's decision making style refers to a mental model or tendency, a cognitive orientation towards purchase which is often observable in the majority of the consumer's choices (Bauer et al. 2006; Duryasula et al. 1993). Such styles may emerge as a result of customers' past experiences. Studies point out that a customer, when shopping, faces various factors such as quality, price, brand, confusion etc. (Sproles & Kendall 1986). Thus decision making styles are significantly important in realizing and understating purchase behavior and motivations.

Iranian society is mostly young and the level of people's education and awareness has been increasing, as a result their needs are different from the past. In addition, the attention to social interactions and, consequently, public expression and related products such as mobile phones have been undergoing change. Therefore, a suitable opportunity for mobile phone manufacturers and marketers has appeared. Despite of the increasing need of domestic production of mobile phones, the Iranian market is unfortunately dominated by foreign manufacturers. This study, therefore, tries to find and offer so practical solutions to the manufacturers and marketers of this market sector. Such solutions can be the means of gaining better insight in consumers and their needs so that they may attract a greater portion of market share. In this study, apart from examining eight styles of Sproles and Kendall's model on mobile phone purchase, the components of store location, power of parents, and criticism by others would be analyzed.

Review of literature

Markets and retailers offer various products with different specifications, price-range, and quality. Further, they pay close attention to whether the product they supply meet the standards in consumers' minds regarding product design, production, and durability. As consumers' tastes differ when purchasing due to their different decision making styles, Sproles and Kendall (1986) proposed a framework to regulate customer decision making styles. Generally, shopping is a kind of activity for which customers show enthusiasm, so it is worth experiencing the process of decision making and the effect it has on the consumer. The majority of manufacturers and large stores provide consumers with a wide

range of goods. Such stores are designed in an environment in which customers are stimulated to spend more money. More stimulators will excite consumers to a greater extent, and they will spend more time trying and shopping (Bae 2004).

Consumer behavior is a challenging subject which includes individuals and what they buy, the reasons and the ways they do so, marketing and everything going on in a marketplace (Wilkie 2003: 22). Marketing, as a discipline, attempts to influence consumers' thoughts and reactions (Cutler and Armstrong 2011: 132).

Consumer decision making styles are some mental orientations that determine how consumers approach decision making and choice their product. The concept of decision making styles, as proposed by Sproles and Kendall, is similar to the field of individual personality in psychology. Studies on such styles aim at providing an instrument for marketers so that they may have a better understanding of consumer purchase styles (Sproles and Kendall 1986).

Sproles (1985) and Sproles and Kendall (1986) are the pioneers of creating and developing the questionnaires for consumer styles based on the view of consumer characteristics. In 1985 and based on previous studies, Sproles identified nine dimensions of purchase decision making styles and implemented 50 instruments connected with cognitive and emotional orientations of consumers. In 1986, Sproles and Kendall revised the first questionnaire and proposed a newer and more efficient scale. In the second revision, the dimensions were reduced to eight styles. It is noteworthy that the second revision rested on only 40 effective instruments. These eight styles are presented in the following table (Sproles and Kendall 1986).

| High quality consciousness or Perfectionism |
| Brand consciousness |
| Novelty-fashion consciousness |
| Recreational-hedonistic shopping consciousness |
| Price consciousness |
| Indifference and purchase without foresight |
| Confusion by choice |
| Habitual and brand-loyalty consciousness |

Figure 1 Eight features of consumer decision-making styles

As it is defined by Sproles and Kendall (1986), Consumer decision making style is a mental tendency that explicates a consumer's orientation. They have argued that each consumer may create a relatively sustainable purchase personality, which is predictable through similar ways, just like psychologists that consider personality in its broadest aspect.

Following the introduction of this model to date, a good number of studies have been undertaken in many countries and different markets to evaluate the generalizability of this model. The results exhibit that not all eight styles exist in every single country and even in some societies (e.g. Germany and England) some similar styles were recognized and in others some distinct styles are observed (Bauer et al. 2009). In a study by Nassimi et

www.ijmae.com

al. in Iran (2015) it was found out that together with the styles proposed by Sproles and Kendall, customers pay attention to store location, and they may be under the influence of their parents and acquaintances.

Table 1 Comparison of studies on consumer decision making styles

Sproles (1985) U.S.A.	Sproles & Kendall (1986) U.S.A.	Lysonski et al. (1996) India	Canabal (2002) India	Radder & Pearson (2006) China	Mokhlis & Salleh (2009) China
Quality consciousness	Quality consciousness	Quality consciousness	Brand loyalty	Quality consciousness	Brand loyalty
Price consciousness	Brand loyalty	Brand loyalty	Quality consciousness	Recreational-hedonistic shopping	Recreational-hedonistic shopping
Brand loyalty	Novelty-fashion consciousness	Novelty-fashion consciousness	Confusion	Compulsiveness	Confusion
Novelty-fashion consciousness	Recreational-hedonistic shopping	Recreational-hedonistic shopping	Compulsiveness	Mental image consciousness	Novelty-fashion consciousness
Purchase avoidance	Compulsiveness	Compulsiveness	Time consciousness	Habitually	Quality consciousness
Compulsiveness	Confusion	Confusion	Recreational-hedonistic shopping		Purchase avoidance
			Careless purchase		Careless purchase

Table 1 presents a comparison between the characteristics of decision making styles in different countries. Some differences in the way consumers make decisions derive from their cultural differences.

Research method

This study is an applied type of research as the results obtained from it could be used by marketing and advertising practitioners in the mobile phone sector and by mobile phone manufacturers. The study population consists of all mobile phone users in Iran. Through the utilization of random sampling, a 369-participant sample was drawn. In order to design the study questionnaire, a reductionism technique was used. In order words, the concrete study questions were achieved through study variables, which are abstract concepts. In this procedure, we first achieved the dimensions of each variable through the concepts, then we made the study questions by the achieved indicators. The standard questionnaires of Sproles and Kendall (1986) were used to design the instrument questions. For the variable of the power of parents, Polya's questionnaire of purchase decision making and family roles (2012) was used. And for the variable of others' influence, Nassimi et al.'s questionnaire (2015) was used. The instrument reliability was calculated by Cronbach's alpha in SPSS 21 with a value of 0.88, which shows the high reliability of the questionnaire.

Table 2 Cronbach's Alpha

Dimension	Cronbach's alpha
Sum of alpha	0.88
Quality consciousness	0.76
Brand consciousness	0.78
Novelty-fashion consciousness	0.78
Recreational-hedonistic consciousness	0.74
Price consciousness	0.70
Compulsiveness	0.71
Confusion	0.70
Habitual, brand loyalty consciousness	0.70
Store location	0.73
Power of parents	0.88
Recommendation by others	0.70

Confirmatory Factor Analysis (CFA) was used to test the construct validity of the instrument. In CFA, in case the factor loading of each indicator of a corresponding construct has a *t* value of higher than 1.96, that indicator has the sufficient accuracy to measure the considered construct. The dimensions of quality consciousness, brand consciousness, novelty-fashion consciousness, recreation consciousness, price consciousness, compulsiveness, confusion, habitual brand-loyalty consciousness, store location, recommendation by others, and the power of parents were measured by first order CFA. Nevertheless, Question 53 – the fifth question of habitual brand-loyalty consciousness) was eliminated because of having a *t* value of less than 1.96. Other items are the questionnaires are valid to measure the concepts. In the second order CFA, the dimension of purchase decision was identified as the independent variable. In the following table, the fitness indexes and *t*-value, standard solution for each question are presented.

Table 3 Confirmatory factor analysis

Variable	Item	t-value	Standard solution	Fit indexes
Quality consciousness	Quality2	10.79	0.60	$chi-Square$ $= 2473.65$
	Quality4	6.68	0.39	
	Quality5	13.51	0.75	
Brand consciousness	Brand1	11.96	0.61	$d_f = 857$
	Brand2	12.52	0.64	
	Brand3	13.65	0.68	$\frac{x^2}{df} = 2.88$
	Brand4	7.38	0.40	
	Brand7	13.55	0.68	
Fashion consciousness	Fashion1	16.23	0.79	p- Value=0
	Fashion2	11.10	0.58	
	Fashion3	14.01	0.70	RMSEA=0.07
	Fashion5	10.42	0.55	

Variable	Item	t-value	Standard solution	Fit indexes
Hedonistic consciousness	Hed1	14.51	0.71	
	Hed3	15.54	0.74	
	Hed4	17.92	0.83	
	Hed6	11.89	0.60	
Price consciousness	Price5	7.45	0.45	
	Price6	6.80	0.41	
	Price7	12.38	0.78	
	Price9	7.52	0.45	
Impulsiveness	Impuls4	13.09	0.69	
	Impuls5	12.23	0.65	
	Impuls7	3.31	0.19	
	Impuls8	12.18	0.65	
	Impuls9	2.64	0.15	
Confusion	Confus1	2.43	0.14	
	Confus3	6.67	0.37	
	Confus5	13.60	0.69	
	Confus6	16.50	0.81	
	Confus7	11.69	0.61	
Habitual consciousness	Habit1	9.52	0.78	
	Habit2	5.32	0.34	
	Habit4	5.60	0.35	
Store location	Store2	9.87	0.57	
	Store3	13.30	0.85	
Criticism by others	Others1	14.81	0.72	
	Others2	11.40	0.59	
	Others3	15.14	0.73	
	Others4	13.58	0.68	
	Others5	14.54	0.71	
Power of parents	Parent1	15.22	0.73	
	Parent2	9.74	0.52	
	Parent4	11.69	0.61	
	Parent5	14.64	0.74	
	Parent6	12.96	0.66	

Furthermore, according to Table 3, the fit indexes of the measurement models had acceptable values. The Chi-2 index with $\frac{x^2}{df}$ degree of freedom must be between 1 and 3 to indicate that the model is appropriately fit. RMSEA, as a suitable index shows that whether the designed model is acceptable or not. This index falls in a range between 0 and 1 and in case RMSEA < 0.08 the index is acceptable. According to the above table, the consistency of the questions with their relevant constructs is reliable. In other words, this instrument is able to measure what the researchers intended to measure, and the associations between the constructs or the latent variables is well-founded.

Results

Structural equations results (Path analysis) and Test of hypotheses

According to the following output, each of the relationships between the model variables has a *t*-value of higher than 1.96, meaning that all relationships between the variables of purchase decision making styles and quality consciousness, brand consciousness etc. are significant.

Eleven dimensions of quality consciousness, brand consciousness, fashion consciousness, recreational consciousness, price consciousness, compulsiveness, confusion, habitual consciousness, store location, criticism by others, and power of parents could account for the decision making styles of mobile phone users in Iran.
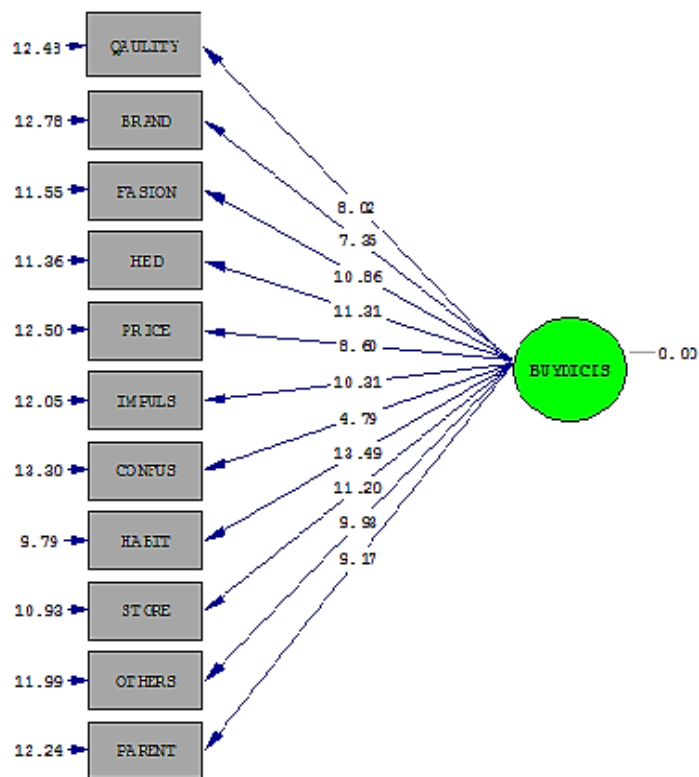
Chi-Square=66.65, df=34, P-value=0.00069, RMSEA=0.051

Figure 2 Structural Models, Significance Coefficients
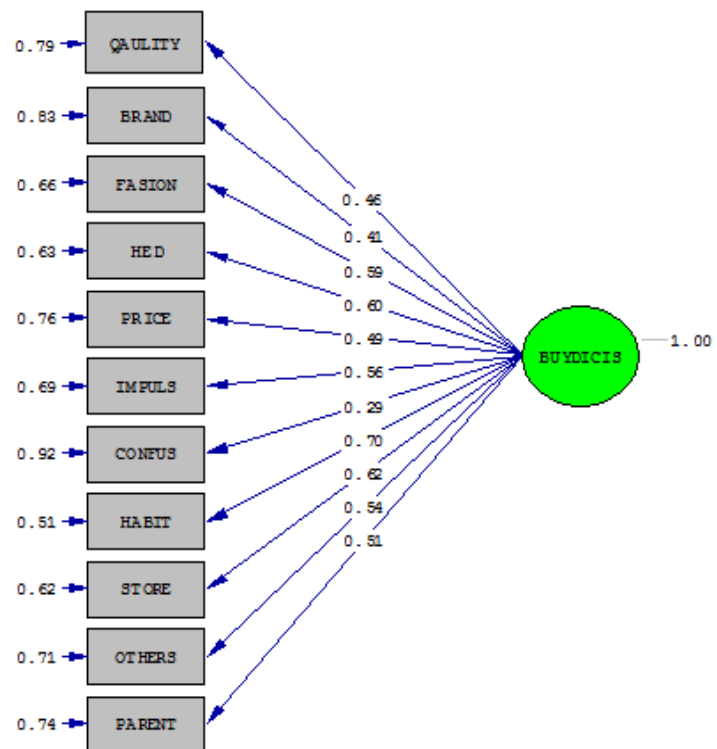
chi-Square=66.65, df=34, P-value=0.00069, RMSEA=0.051

Figure 3 Standard Factor Coefficients Regarding Variable Correlation

In the following table, the latent and tangible variables are presented. According to Figure 2 and Figure 3 which show the significance coefficients and standard coefficients respectively, the following results can be analyzed. A structural equation explains the relationships between the independent variables and consumer decision making styles in the statistic population.

Table 4 Variables and Analysis of their Effect on Purchase Decision Making

Latent	Tangible	Sig.	Status	Direct Effects
Consumer Decision Making Styles	Quality	8.02	Confirmed	0.46
	Brand	7.35	Confirmed	0.41
	Fashion	10.86	Confirmed	0.59
	Hedonistic	11.31	Confirmed	0.60
	Price	8.60	Confirmed	049
	Compulsiveness	10.31	Confirmed	056
	Confusion	4.79	Confirmed	0.29
	Habit	13.49	Confirmed	0.70
	Location	9.93	Confirmed	0.54
	Others	9.93	Confirmed	0.54
	Parents	9.17	Confirmed	0.51

Among these dimensions, *Habitual brand-loyalty consciousness*, with a coefficient of 0.70, and *Store Location*, with a coefficient of 0.62, had the highest effects on customers'

styles of decision making when purchasing mobile phones. In the following table, the results of the model fitness are presented, which point to the suitability of the model.

Table 5 Model Fitness

Index	Allowance	Results	Status
$\dfrac{X^2}{df}$	$\dfrac{X^2}{df} < 3$	1.96	Fit
RMSEA	RMSEA < 0.08	0.051	Fit
GFI	GFI > 0.9	0.97	Fit
AGFI	AGFI > 0.9	0.94	Fit
CFI	CFI > 0.9	0.97	Fit
NNFI	NNFI > 0.9	0.95	Fit
IFI	IFI > 0.9	0.94	Fit

Discussion

Sproles (1985) studied on the variables of price consciousness, quality consciousness, brand consciousness, fashion consciousness, purchase avoidance, and compulsiveness in the United States. The results of those studies pointed to the fact that quality was the most important factor among American people when purchasing. In India, Canabal (2002) studied on the variables of price consciousness, quality consciousness, brand consciousness, purchase avoidance, compulsiveness, confusion, and hedonistic-recreational consciousness, and finally found out that brand was the most significant factor among Indian shoppers. The comparison of the present study with other domestic and foreign studies demonstrates that different cultures in different nations affect the way individuals decide. On the other hand, even the focus on various product categories shows that customers exhibit varied styles of decision making.

In the present study, the most noticeable style among the participants was habitual brand-loyalty consciousness. Such a style refers to the preference of consumers to choose their favorite brands; they stick to a single brand or continue purchasing from a particular store. The attractions of stores can be another factor to make customers return in the future. Stores usually use particular ornaments and scents, bright colors, and music to have attraction. Such actions influence the mental attitude of consumers regarding goods and services. The second significant style is store location. With respect to this observation, mobile phone marketers are recommended that they pay close attention to this factor when promoting and selling their products. Hence, it is suggested that store managers pay utmost attention to their store windows, shelves, and showcases and make more efficient use of environmental factors such as light, color, setting, parking lots, interior design and store space to optimize the way they exhibit what they promote. The existence of an attractive and airy space is very important for customers and the way they decide to purchase.

References

Bae, S. (2004). Shopping pattern differences of physically active Korean and American University consumers for Athletic Apparel. PHD dissertation, Department of

Sport Management, Recreation Management and Physical Education, Florida State University.

Bauer, H., Sauer, N.E., & Becker, Ch. (2006). Investigation the relationship between Product Involvement and Consumer Decision Making Styles. *Journal of Consumer Behavior*, 5 (4): 342-354.

Canabal, J. E. (2002). Decision-Making Styles of Young South Indian Consumers: An Exploratory Study. *College Student Journal*, 36 (1), 12-19.

Durvasula, S., Lysonski, S., & Andrews, J. C. (1993). Cross-Cultural generalizability of a scale for profiling Consumers' Decision-Making Styles. *Journal of Consumer Affairs*, 27 (1), 55-65.

Kotler, P., & Armstrong, G. (2011). *Principles of Marketing*. 14th ed, Upper Saddle River, N.J: Prentice Hall.

Lysonski, S., Srini, D., & Zotos, Y. (1996). Consumer Decision-Making Styles: A Multi-Country Investigation. *European Journal of Marketing*, 30(12), 10-21.

Mokhlis, S., & Salleh, H. S. (2009). Decision-Making Styles of Young Malay, Chinese and Indian Consumers in Malaysia. *Asian Social Science*, 12(5), 50-59,www.Ccsenet.org/journal.html.

Nasimi, M., & Pali, S., & Nasimi, M., & Amiri, S., & Nasimi, S. (2015). A model for mobile phone consumer decision making styles in Iran. *Research Journal of Fisheries and Hydrobiology*, 10(10), 382-389.

Polya, E. (2012). Purchase Decision Making processes and Roles within the Family. Theses of PhD Dissertation, Management and Business Administration Doctoral School.

Radder, L., Li, Y., & Pietersen, J., J. (2006). Decision-making styles of young Chinese, Motswana and Caucasian consumers in South Africa: An exploratory study. *Journal of Family Ecology and Consumer Science*, 34, 20-31.

Sproles, G. B. (1985). From perfectionism to faddism: Measuring consumers decision-making styles In: Schnittgrund, K.P, (ed.), the Proceedings of the American Council on Consumer Interests, Columbia, *MO: The American Council on Consumer Interests*, 79-85.

Sproles, G. B., & Kendall, E. L. (1986). A Methodology for profiling Consumer Decision-Making Styles. *Journal of Consumer Affairs*, 20 (2), 267-79.

Walsh, G., Mitchell, V. W., & Hennig-Thurau, T. (2001). German Consumer Decision-Making Styles. *The Journal of Consumer Affairs*, 35 (1), 73-95.

Wilkie, L. W. (2003). *Consumer Behavior*. 5th Ed, John Wiley & Sons Inc.