The Role of Attitudes and Decision Makinig on Product Choice

Case Study: Cellular Phones

Tajzadeh Namin A. A. (Corresponding author)

Allamah Tabataba'I Faculty of Management and Accounting

Haft Paykar, Nezami Gangavi, Valy Asr, Tehran, Post Code 1434863111, Iran

Tel: 98-21-887-700-1214   E-mail: tajzadehnamiin@yahoo.com

Rahmani Vahid

Master of Business Management

E-mail: rahmani_vahid@hotmail.com

Tajzadeh Namin Aidin

Ph.D student of Marketing at Dallas University

E-mail: Aidin_tajzadehnamin@yahoo.com

Abstract

The process of deciding over (choosing) a brand may be influenced by situation and content. "Brand attitude" and "corporate attitude" affect consumer's brand choice and re-buying rate. The findings of the study can provide companies and active players in production, marketing, and sale of cell phones with practical suggestions as well as guidelines on how to meet consumer's needs. In this descriptive survey, a questionnaire with 57 questions was used to gather required data. The statistical population consisted of buyers and users of cell phones in cell phone shopping centers in Tehran. A combination of multi-stage cluster sampling and judgment sampling was employed. In total, 385 questionnaires were analyzed. SPSS and LISREL were used for descriptive and inferential analysis of data and hypothesis test based on confirmatory factor analysis and structural equation modeling. The findings suggest a significant relationship between the variables "brand attitude", "corporate attitude", and "product (cell phone) choice". In addition, no significant relationship was found between individual decision making processes (independent or mediated) and product choice.

Keywords: Brand, Attitude, Consumer's behavior, Product choice, Cell phone

1. Introduction

The fact that the total number of mobile subscriptions passed the 5 billion mark early 2010 meaning a global penetration of 71.0 per 100 inhabitants. ABI Research expects mobile subscriptions to reach 6.4 billion by 2015 (News, 2010) confirming the ongoing diffusion of communication technologies and the overall transition to a global information society (Telecommunications Union (ITU), 2010). It also noteworthy, however, that double-digit growth in the mobile cellular subscriptions' growth appears to be ending during next few years (Telecommunications Union (ITU), 2010).

The cell phone is the most important item we carry every day (Kannon, 2006). It was the business use, which initially drove the development of cell phone technology (De Vries, 2005). Later on sending short messages (SMS) emerged and fundamentally changed the usage of the cell phones. SMS is still a technology, which is a predominant part of the communication culture among youth (Lenhart, 2010) so that 42% of them can text their eyes closed (Interactive, 2009). Since then cell phones with camera, video and broadcasting capabilities have emerged to become to most users' reach and use (Nickerson et al., 2008).

Demographic variables like age have an impact on our needs (physiological needs, safety and security, love and belonging, esteem, and self-actualization (Loo, 2009), and thus also on the usage of the various communication

devices like cell phones. Kannon (2006) discovered for example that more than 75% of mobile phone users carry a phone for the sense of security and particularly so among older users (Loo, 2009).

The cellular phone technology has evolved radically since its' inception. A study done among youth in US discovered that text messaging (SMS) was by far the most important feature (49%) beyond voice calls followed by camera (25%) and games (12%) News, 2006. Nowadays the cell phone can potentially integrate more than 100 specific features including video player, video camera, TV, personal organizer, and mp3 player. The incorporation of these kinds of features goes far beyond the traditional communication role of the cell phones (Lee, 2007). Technology has been driving this change, and has enabled the fulfillment of the changing customer needs and expectations over time. The desirability of a product can be increased by the insertion of fresh and innovative features (Glasscock & Wogalter, 2006).

In conclusion there appears to be an abundant amount of extant literature relating to cell phones in general, but at the same time it is quite clear that there is shortage of research relating to the differences culture and their specific feature preferences (Glasscock & Wogalter, 2006).

The main goal of this study is to identify the variables related to product choice of cellular phone, from the Iranian customers' perspective, living in Tehran.

Brand image is a particularly important to any company that employs marketers to improve the image in consumers' minds. Consumers buy brands not goods. Brand is something bought by consumers while goods are something produces in factory. Competitors can imitate production of certain goods, but brands always remain unique (Kotler, 2001). The process of choosing a particular brand may be influenced by situation and content (Punj, 2001). "Brand attitude" and "corporate attitude" both have impact on consumers' product choice and re-buying rate.

Measuring customer attitude is central to many marketing situations. Market segmentation strategies are usually directed by data on attitudes. In some cases, it is essential to determine attitudes of different market sectors in order to develop positioning strategies. Measuring individual attitudes often provides a basis for evaluating effectiveness of advertisement operations. In addition, the assumed connection between attitude and behavior may affect predicted desirability of produces and development of marketing plans (Ebrahimi *et al.*, 2006).

2. Literature Review

Recently, abrupt growth in use and penetration of cellular phones has gained attention from universities and research institutes (Massoud & Gupta, 2003; Barnes & Scornavacca, 2004; Park & Yang, 2006). Previous studies mainly focused on product compatibility (Leung, 1998; Gruber & Verboven, 2001; Katz & Aakhus, 2002; Leung, 1998), customer satisfaction (Woo & Fock, 1999), social outcomes (Katriel, 1999; Wei & Leung, 1999), motivations and consumption patterns (Leung & Wei, 2000), and technological conflicts in consumers' lives (O'Shaughnessy & O'Shaughnessy, 2002; Thompson, 1994).

A large number of studies have been carried out on individual decision-making processes. Those scholars who favor cost-benefit approach believe that consumers follow a rational and deliberate behavior based on maximum desirability while making individual decisions (Hauser & Werberfelt, 1990). Other consumer learning scholars assume that consumers follow a deliberate heuristic to narrow down the list of available brands by evaluating and focusing on different brands and learning through re-buying experiences (Mehta *et al*., 2003).

Rio *et al.* (2001) examined associative features of trademarks. They studied different roles played by trademarks in form of guarantee, personal identity, social identity, and personal dignity in consumer response in terms of paying extra prices, recommending products to others, and accepting other auxiliaries. They found that trademark associations, which are the result of trademark functions, have positive effects on consumer behavioral response.

However, scarcity of practical studies on brands and products manufactured by cutting-edge technologies is notable (Schoenfelder & Harris, 2004), although high-tech products have contributed in the higher importance given to public awareness of branding (Ward *et al*., 1999). In fact, high-tech marketing is a challenging task and use of brands has recently reached its minimum level (Zajas & Crowley, 1995). However, increasing number of these companies are building brand images in order to secure their long-term benefits (Aaker & Jacobson, 2001).

A few studies have focused on the outcomes of "individual decision making methods", particularly on how product features influence individual decisions and consumers' product choices among available brands (Priester *et al.*, 2005).

Although previous studies (Aaker, 1999) showed that both individual and situational factors have positive effects on brand attitude, however, the interaction of these factors have not been well studies. In addition, a major part of studies on cell phone has been carried out in the US, UK, or Scandinavian countries, and therefore, features of a

demographically different area can help us understand the effects of culture on consumer attitude and personal perception of brands (Lim & Ang, 2008).

2.1 Brand

A brand is a name, sign, or any distinctive feature of a company's products and services provided to market. Brand can be defined as "a name, a term, a symbol, a design, or their combination which is used to represent goods or services presented by a seller or a group of sellers and to distinguish them from competitors" (Keller, 1993).

There are three classic methods to perceive decision making processes involved in brand choice: aided, spontaneous, and top of the mind.

A brand in consumer's top of the mind is probably the first brand sought by the buyer (Laurent *et al.*, 1995). It is most likely that a potential customer focuses on brands that first come to his or her mind while buying products. In the spontaneous process, consumer tends to a pick a certain brand unconsciously without having a clear reason for this choice that can be explicitly expressed. In the aided process, consumer usually seeks information from a wide range of resources before choosing a certain brand. The information may be delivered to consumers by reference groups (*e.g.* friends, family, and colleagues), media (*e.g.* internet, TV, and press), or other sources (Keller, 1993).

Insert Figure 1 Here

2.2 Consumer Behavior and Attitude

Consumer behavior is affected by several factors including attitude toward a certain product, service, or brand. The requirement for assessing consumer attitude and how market receives the products or response negatively or positively, has led marketers to conduct studies on markets. Consumers evaluate products based on their important features. In addition, different weights are given to each feature by consumers (Ranjbaran *et al.*, 2007: 109).

Furthermore, products presented by competitors under other brands are different in terms of these features. This creates different attitudes toward different brands in consumers. It is quite critical to have knowledge over individual attitudes in order to predict or direct consumer behavior in markets (Ranjbaran *et al.,* 2007: 110). Finally, in some stage following buying a product, customer starts evaluating goods and their efficiencies based on his/her expectations. A satisfied customer will send a positive feedback on product/service and recommend it to friends or family members. Satisfied customers will buy other products/services from the same company in an ongoing trend (Kotler *et al.*, 2001) and may even pay extra amounts to obtain their preferred products.

Insert Figure 2 Here

2.3 Consumer's Brand Attitude

Scholars have proposed different definitions for brand image. Aaker (1990) and James (2004) believe that any likable element in a brand which helps shaping the image of that brand constitutes brand perception. Another general definition says that "anything associated with a brand name in consumer's mind is brand image" (Aaker, 1991; Low & Lamb, 2000). These perceptions may vary depending on experiences with the product, product features, position of brand, promotional connections, awareness of prices, packaging, consumer's particular imaginations, and so on. For example, the brand image for "McDonalds" may include Golden Arc (as a symbol), McDonald Ronald (as a character), and stable quality (as a product feature).

Brand perceptions help consumers judge the value of a particular brand. For example, exporting country of a certain product influence how the product is perceived as being of high or low value. Consumers tend, for example, to follow widespread- and sometimes baseless- clichés relevant to special brands or particular countries as best producers (*e.g.* French perfume, Italian leather, and Japanese electronic devices) (Cateora, 1996).

2.4 Corporate Attitude

Managers are well aware of the importance of their corporate image as an intangible asset. However, they do not have adequate systematic tools to measure it (Riel, 1994). Although there are several ways to do this, it is not clear which of these ways is the best method to measure corporate image. Verhallen and Poiesz (1998) identified three approaches to the concept of "image". The first approach, which is used for corporate, defines corporate image as a network of segmented concepts in the minds of beneficiaries. Corporate image in this approach is measured through qualitative study designed to examine subjective connections. In the second approach, corporate image is regarded as an abstract view; that is, a set of different features of a company perceived by beneficiaries. This image is determined through identification of prominent features of corporation and based on evaluation made by beneficiaries. In the third approach, a corporate image acts as a growing impact on the position of corporate products compared to the position of goods and services delivered by competitors. This image is realized through asking beneficiaries for comparing companies and identifying their similarities and positions (Cees *et al*., 1998).

Here, we used the second approach to measure consumer attitude toward producers (distributors) of cell phones. Based on a recent study by Hande *et al.* (2010), we identified prominent and significant features of cell phone that affect decisions made by buyers and then used Likert scale to evaluate consumer attitude.

2.5 Cell Phone Market

Dynamicity of cell phone market is observable in both consumers and business environment. According to R.N.C.O.S (2008), increasing demand for mobile entertainment and advanced technological applications in business resulted in decreased prices and a booming global market for this industry.

In addition to high rate of penetration, cell phone is of great importance in terms of marketing because the re-buying rate for this technological tool is rapidly growing. Furthermore, number of users with more than one cell phone is increasing and this has led to a penetration rate of more than 100% in many markets (Wallace, 2006).

Unfavorable market conditions and the rapid growth in technologies used in cell phone industry encourage companies to better understand consumer needs and present unique products which are able to compete with similar products available in the market. Therefore, understanding consumer needs and identifying different market segments with distinct behaviors become essential (Hande *et al.*, 2010).

Consumers regard a brand not only as a guarantee for quality and performance of products, but also as an assurance for distinctive features and for affective bonds to products (Bahmanziari *et al*., 2003; Jiang, 2004).

Picking a brand provides mechanisms that can save marketers from increasing trend in production and creates higher levels of value to attract products with newer dimensions. In fact, when a product is produced to direct customer values, brand will come along to add a new dimension to the product and improve consumer's knowledge over this added value (Verma, 2007).

Hande *et al*. (2010) conducted a study on behavioral segmentation of cell phone market. A major objective of this study was to prepare a descriptive list of criteria which are expected to affect decision making process involved in buying cell phones. Since cell phones are complex products with advanced technology and since they have become a part of users' life, the diversity of tangible and intangible features affecting buyers' decision is quite high. For the purpose of this study, features of this product (cell phone) were identified through a broad study of communication magazines, cell phone manuals, as well as interviewing cell phone distributors.

In addition, face-to-face interviews with cell phone users were conducted in order to identify features considered by buyers while buying cell phones (Hande *et al*., 2010).

Insert Table 1 Here

In order to better achieve to the research goal, The factors such as decision making process (top of the mind and spontaneous aided) and product choice (recommending product to others, continued product or brand choice, in future, buying other products from the same company or brand generalization, and paying extra costs), should also be considered based on the following model.

3. Theoretical Framework

Based on the literature review and research goal, an integrated model, allow to better comprehend the attitudes of customers towards cellular phone product choice in Tehran.

Insert Figure 3 Here

4. Research Methodology

Regarding data collection, this research is a surveying, descriptive research. Research's population includes holders and purchasers of cell phone in the cell phone centers of Tehran city. With respect to the fact that performing the research on the all members of the population was time-consuming and non incommodious, sampling was administrated in this research and a combination of determinative and multi-level clustering was used. In this way, the Tehran city was clustered to five zones (clusters) including North, South, East, West and Center; the main markets of cell phone were identified and the questionnaires had been distributed among the holders and purchasers of cell phones. Collecting data, a questionnaire had been used in this research. The questionnaire includes fifty-seven questions, of which four were related to demographic items and fifty-three questions were designed according to psychological items.

Since the required sample for this research was 385 persons, about 450 questionnaires had been distributed. Finally, 400 questionnaires were returned, from which, due to the questionnaire's incompleteness and incorrect answering, only 390 questionnaires were usable. The questionnaires which were incomplete, had been removed.

Narrative determination of the research questionnaires, the symbolic narrative (apparent or the content) method had been employed. The constancy test had been performed for nine variables, questionnaires' forty-four questions and forty samples. The Cronbach Alpha was computed regarding the factors and variables. Also, the questionnaire's Cronbach Alpha was 0.865.

The resources used in this research can be classified into two categories: The secondary resources: the research's secondary resources are the library resources which had been used through studying related Persian and English books and articles and theses thesises and as well as the websites.

Preliminary resources: the preliminary resources used in this research are the field surveys which include designing and distributing the questionnaires.

4.1 Research Hypotheses

1- There is a significant relationship between "corporate attitude" and "brand attitude" in cell phone market.

2- There is a significant relationship between "brand attitude" and "product choice" in cell phone market.

3- There is a significant relationship between "individual decision-making processes" and "product choice" in cell phone market.

4- "Individual decision-making processes" mediates the effects of "brand attitude" on "product choice".

5- "Individual decision-making processes" mediates the effects of "corporate attitude" on "brand attitude" and "product choice".

4.2 Statistical Analysis

Based on the preliminary resources the data has been analyzed according to the descriptive and inferential statistical methods.

4.2.1 Descriptive Statistics

Education: The education of the majority of population sample was diploma/pre-university and higher 332 (%86.2) and the education of 29 (%7.5) was under-diploma. However the education of 24 (%6.3) was not declared.

Age: The age of the majority of population sample was between 20 to 50 years 339 (%88) and the age of 18 (%4.8) was 51 years and more. However the age of 28 (%7.2) was not declared.

Income: The income of the majority of population sample was between 150000 to 1million Toman 321 (%83.4) and the income of 46 (%11.9) was more than 1 million Toman. However the income of 18 (%4.7) was not declared.

Sex: The sex of the majority of population sample was female 198 (%51.4%) and the sex of 164 (%42.6) was male. However the sex of 23 (%6) was not declared.

4.2.2 Analyzing Conceptual Model

For studying the relationship between researches' independent and dependant variables, the estimation of standardized functional burdens (standardized regression coefficients) was used. The contextual model can be seen in the figure 4.

Insert Figure 4 Here

The relationship between research indices and related variables as well as the relationship between independent, moderator and dependant variables are shown in the figure 4. With respect to the fact that all the relationships which had been shown in Figure 4 are not significant, therefore, the t-student contextual model was studied in the figure 5.

Insert Figure 5 Here

Figure 5 shows that the relationship between individual decision-making method as the independent variable and product selection as the dependant variable is rejected. Also, the indices 2 and 4 which are related to the attitude toward brand variable and index 40 which is related to the individual decision-making methods variable, are not significant.

The intensity of the indirect relationship between each independent and moderator variable can be evaluated in terms of the direct relation relationship between any independent variable and moderator variables as well as the direct relationship between moderator variables and dependant variable i.e. product selection. The relationships' intensity can be seen in the following table.

Insert Table 2 Here

According to the above table one can say that: The individual decision-making methods variable affects the product selection variable (the dependant variable) by 0.06; effect of which is direct and very weak. In fact the relationship is not significant.

The attitude toward the brand variable affects the individual decision-making variable by 0.12; this effect is direct and weak. Also, affects the product selections directly and strongly.

The attitude toward company variable affects the attitude toward brand variable by 0.63, strongly and directly.

The multiple-determination coefficient of the aforementioned model is 0.73, which means that the above variables can explain the product selection variable by seventy-three percents.

Analyzing the model significance, the Propriety Excellency indices of the appropriated model as well as the interpretation criteria of each index are shown in the.

Insert Table 3 Here

Studying propriety indices, considering indices' criteria, shows that the model is well appropriated. Therefore, the final model (Figure 5) could explain the relationship between the research variables truly. Indeed, the chi-square index, in the above table, reveals the inappropriateness of the suitable model. This index is one of the important index determining the model propriety which is so sensitive to the sample size, and the larger the sample size the more the sample will be significance. In this research the chi-square index wasn't significant; because the sample was so small; therefore; considering that the other indices including CFI, GFI and RMSEA are significance we can ignore that.

5. Research Findings

One of the advantages of such a research is that many resources and indices will be considered, and these researches have a potential capacity helping product marketing. In result, it seems that such researches are suitable for determining marketing strategy and tactical decisions, evaluating the importance of indices which affect consumer decision-making, and evaluating the success of marketing decisions.

The first hypothesis studies the relationship between attitude toward the company and attitude toward brand. In this way, two main factors including seven indices had been considered for the attitude toward company variable; which was considered as the independent variable. Using the factorial analysis and specified structural equations, we see that the attitude toward company variable affects the attitude toward the brand by 0.63, directly and relatively strongly.

In order to study the relationship significance, the t-student statistic was computed which was 4.36. Since the statistic is greater than 1.96, the relationship is significant, and, therefore, the first hypothesis was accepted.

The second hypothesis studies the relationship between attitude toward the brand and product selection (cell phone). In this way, seven factors including thirty indices had been considered for the attitude toward brand variable; which was considered as the independent variable. Using the factorial analysis and specified structural equations, we see that the attitude toward brand variable affects the product selection (the dependant variable) by 0.42, directly.

In order to study the relationship significance, the t-student statistic was computed which equals 3.32. Since the statistic is greater than 1.96, the relationship is significant, and, therefore, the second hypothesis was accepted.

The third hypothesis studies the relationship between individual decision-making methods and product selection (cell phone). In this way, three indices were considered for the individual decision-making methods variable; which was considered as the independent variable. Using the factorial analysis and specified structural equations, we see that the individual decision-making methods variable affects the product selection (the dependant variable) by 0.06; the effect is very weak and direct.

In fact the relationship is not significant. Therefore, the third hypothesis is not true. It means that this research doesn't uphold that there is a significant relationship between individual decision-making and product selection.

The forth hypothesis explains the fact that the individual decision-making methods moderate the effect of attitude toward brand on product selection (cell phone). With respect to the fact that the standardized functional (factorial) burden for the moderator variable equaled 0.06, therefore, the individual decision-making as the moderator variable effect on product selection as the dependant variable is not true and will be rejected. Therefore, we can't claim that this variable effects product (cell phone) selection. On the other hand, the attitude toward brand variable doesn't affect product (cell phone) selection, through the moderator variable. In other words, the research findings don't uphold the forth hypothesis.

The fifth hypothesis explains the fact that the individual decision-making methods moderate the effect of consumer's attitude toward brand on product selection (cell phone). The intensity of attitude toward the company's effect on product selection (the dependant variable) equals the effect of attitude toward company variable on attitude toward

(0.63) by (*) attitude toward brand effect on product selection variable (0.42), which will be 0.26. the attitude toward company variable could affect the product selection, indirectly, through the individual decision-making (the moderator variable), but considering the fact that the individual decision-making variable effect on product selection was rejected, therefore, the indirect effect of attitude toward company variable on product selection would be rejected ,too.

6. Conclusion

The results of testing the first hypothesis shows that, considering the issue selection of competitive products producer including cell phone, household staffs, lap-top and etc., the Iranian consumer places the most emphasize on the number of selling and service centers. Therefore, such companies, by making their centers more and more, can attract the consumers to their products. The research findings show that the companies which offer various- price products would have more chance to be selected by the Iranian consumer, compared to other competitive companies.

- Having a positive attitude toward the competitive products' producer country is another important index which was identified in this research. So, the companies which function in this market can recognize the consumers' contrast attitudes, and, therefore, alter or posit consumers' attitude through proper actions.

- Various payment conditions and product warranty are among other important identified indices; they effect the Iranian consumer attitude toward the producer companies which produce and offer the competitive products. In this way, these companies, administrating different conveniences like bank loans proportionate to the product price, credit purchase and schedulable payment can develop consumers' positive attitude in toward its company and brand. Expanding the warranty and guarantee issues and even unconditional and true guarantee are among the recommendations which people participating in this research had claim.

As we pointed out, analyzing the second hypothesis specified the indices affecting the Iranian consumer attitude toward the cell phone brands, specifically. According to the findings, we recommend that the cell phone producers consider the connecting to the printer capability in their cell phones. With respect to the fact the media's recommendations (including radio, TV, magazines, newspapers and etc.) play an important role in developing a positive attitude toward cell phone brands in Iran market as well as consumers selection, we recommend companies which function in the marketing and selling sector to advertise their brand by these media more and more. Also we recommend the producer companies to consider special capabilities including connecting to the Internet and also offer more accessories like battery, spare frame, hands-free and etc. beside the product (cell phone). The research findings show that cell phones' various designs and colors and beautiful appearance play important roles for developing consumer's positive attitude toward the brand and finally cell phone selection. We recommend that companies, developing marketing strategy, pay more attention to TV advertisement and different ways to develop consumers' positive attitudes. Cell phone easiness and installing practical and consumer-beloved soft wares capability are among the important indices and the consumers pay more attention to them. Considering all mentioned indices can help the functioning companies' marketing and selling programs' to success in the competitive market.

With respect to the fact that the standardized functional (factorial) burden for the moderator variable equaled 0.06, therefore, the individual decision-making as the moderator variable effect on product selection as the dependant variable is not true and will be rejected. Therefore, we cannot claim that this variable effects product (cell phone) selection. On the other hand, the attitude toward brand variable doesn't affect product (cell phone) selection, through the moderator variable. In other words, the research findings don't uphold the forth hypothesis.

In this way, three indices were considered for the individual decision-making methods variable; which was considered as the independent variable. Using the factorial analysis and specified structural equations, we see that the individual decision-making methods variable affects the product selection (the dependant variable) by 0.06; the effect is very weak and direct.

In fact the relationship is not significant. Therefore, the third hypothesis is not true. It means that this research doesn't uphold that there is a significant relationship between individual decision-making and product selection.

Figure 6 depicts the research findings from the Iranian perspective, living in Tehran.

Insert Figure 6 Here

Also based on an unstructured or open question at the end of questionnaire, the cellular phones customer suggested that the features such as "Conference Calling", "Flash Player", "Connectivity to Satellite" and "Mirror for Ladies" are highly desired by those who are living in Tehran.

The outcome of this study can be served as a source of knowledge for marketers and designers of cellular phone for Iran, specially for Manufacturers like Apple and Nokia that are introducing new and more advanced cell phones on a

continuous basis for pushing and experimenting the boundaries of technological convergence. Manufacturers should also put more effort in prolonging the life span and enhance their products. There is an opportunity here for suppliers to be more responsible in their practices to target consumers in Tehran with products which serve the consumption needs and wants.

7. Limitations of Study and Future Research

The limitations of this study, in addition to difficulties of research, such as gathering the information from the customers in Tehran and etc, can be summarized as follows:

The import policies and regulations carried on cellular phones in Iran.

The cultural and social needs and wants of Iranian people regarding cellular phones selection such as the diversity and types of product features.

Also it should be noted that the results of this study is for Tehran, therefore the validity should be done cautiously. Questions like, "What kind results are there in other cities, countries, cultures and sub-cultures?"

Finally the study should be replicated in the current and also other settings. It is quite possible that the attitude and feature preference changes have their origins in technology innovations, and thus it is probable that the results of this study do not hold longitudinally.

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Table 1. Factors linked to prominent features of cell phones

Factor	Variable
F1: Technological compatibility and communication features	Voice and image recording
	Bluetooth and infrared functions
	Camera
	Radio and music player
	Internet connectivity
	Printer connectivity
F2: Social value and reputation	Expensiveness and availability in limited number
	Reputation
	TV advertisement
	Recommendation by reference groups
	Rewards
	Positive reviews in media
F3: Physical features	Low weight
	Small size
F4: Skills and quality of service	Service network
	Guarantee and warranty
	Distribution centers
	Country of origin
F5: Price incentives and payment method	Advertising activities by competitors
	Diversity in payment methods
	Price flexibility
F6: Image and style	Brand image
	Accessories
	Color diversity
	Attractiveness and eye-catching features
F7: Durability and functionality	User-friendly software
	Feature functionality
	Physical strength
F8: Design and applications	Operability
	Design and appearance
F9: Safety and time issues	Harmful radiations
	Storage and time

Source: Hande Kimiloglu *et al.*, 2010.

Table 2. The action intensity between research variables and significant relations through the structural equations model

Dependant variable independent variable	Indices	Individual decision-making methods	Attitude toward brand	Product selection
Individual decision-making methods	Factorial burden	-	-	0.06 Insignificant relationship (third, forth and fifth hypothesis were rejected)
	t score	-	-	0.99
Attitude toward brand	Factorial burden	-0.12	-	0.42 Significant relationship (second hypothesis was accepted)
	t score	3.06	-	3.32
Product selection	Factorial burden	-	0.63 Significant relationship	-
	t score	- Significant relationship (first hypothesis was accepted)	4.36	-

Table 3. Propriety Excellency indices of the contextual model

Propriety Excellency indices		Index score	criteria	Result
CMIN		1254.23	-	Improper Propriety
	DF	389	-	
	p.value	.000	>0.05	
		3.22	Lesser than 2	Improper Propriety
RMR,GFT	RMR	0.04	Almost 0	Excellent Propriety
	GFI	0.96	Almost 1	Good Propriety
	AGFI	0.92	Almost 1	Good Propriety
	PGFI	0.57	> 0.5	Good Propriety
RMSEA	RMSEA	0.021	<0.05	Good Propriety
Baseline	NFI	0.93	>0.90	Good Propriety
Comparison	NNFI	0.95	>0.90	Good Propriety
	CFI	0.92	>0.90	Good Propriety
	RFI	0.88	Almost 1	Improper Propriety
	IFI	0.91	Almost 1	Good Propriety
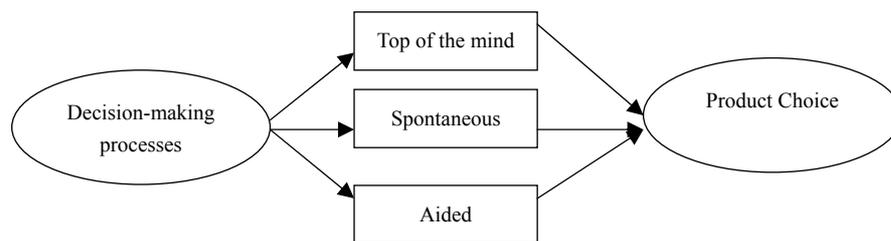
Figure 1. Three classic methods for gaining information on individual decision making process
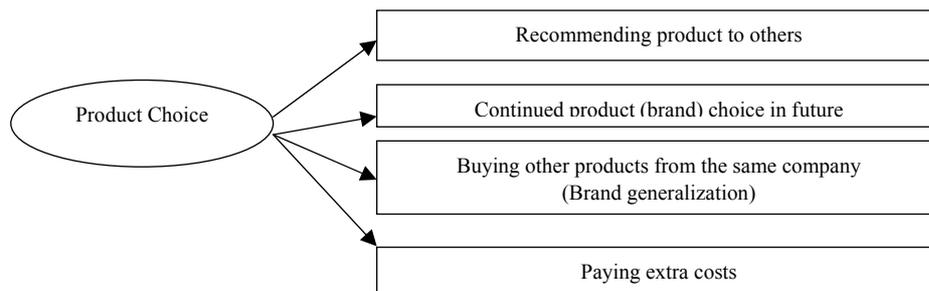*Source:* Laurent *et al.*, 1995.

Figure 2. Possible outcomes after buying a product
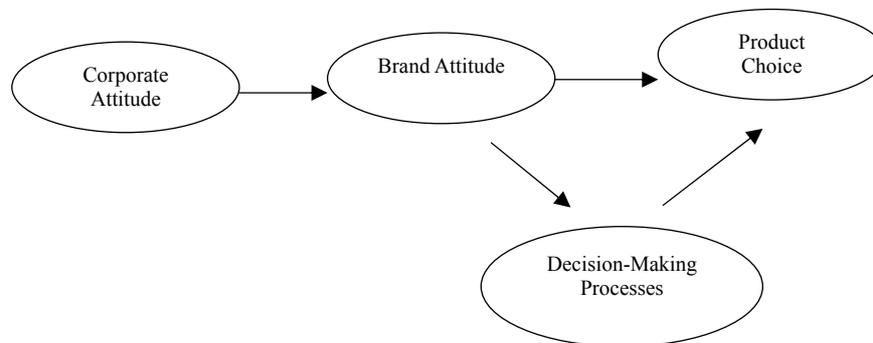*Source:* Kotler *et al.*, 2001.

Figure 3. Impact of attitudes and decision making processes on product choice
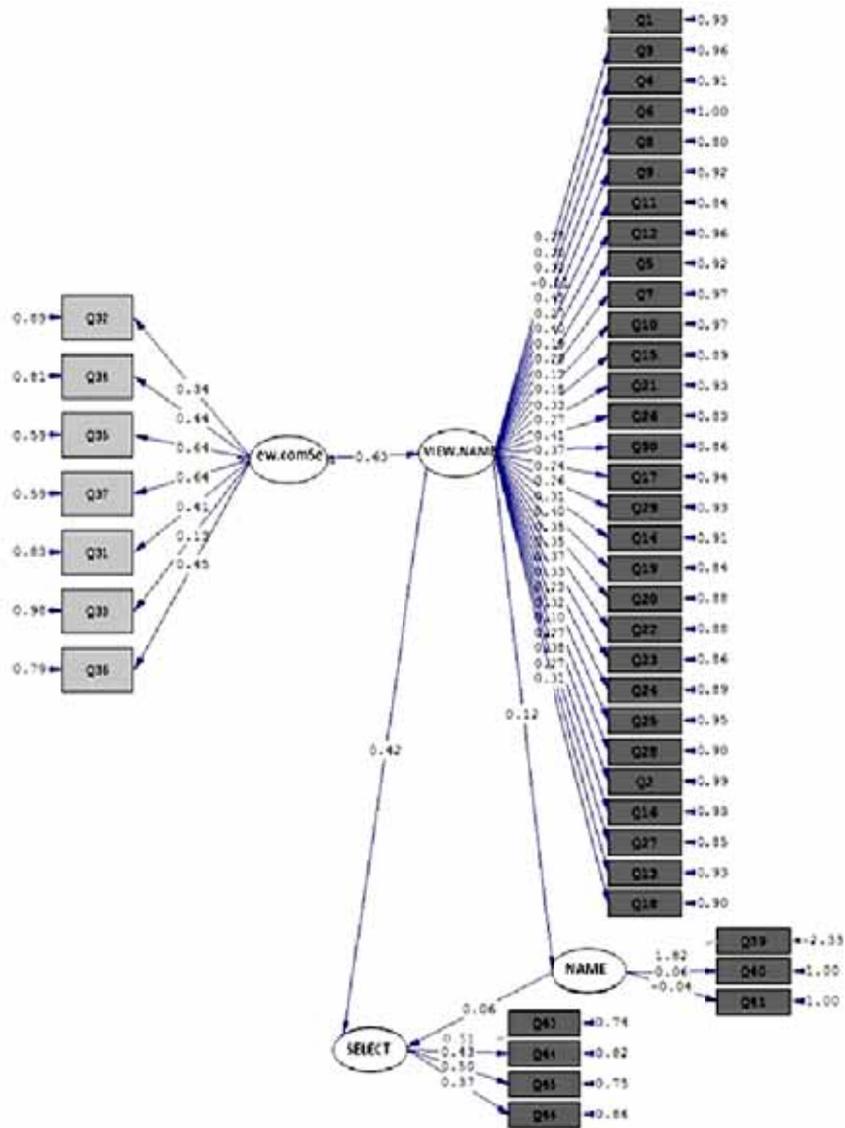*Source:* Jung-ChaeSuh, 2009.

Figure 4. Estimation of standardized functional burdens of the contextual model
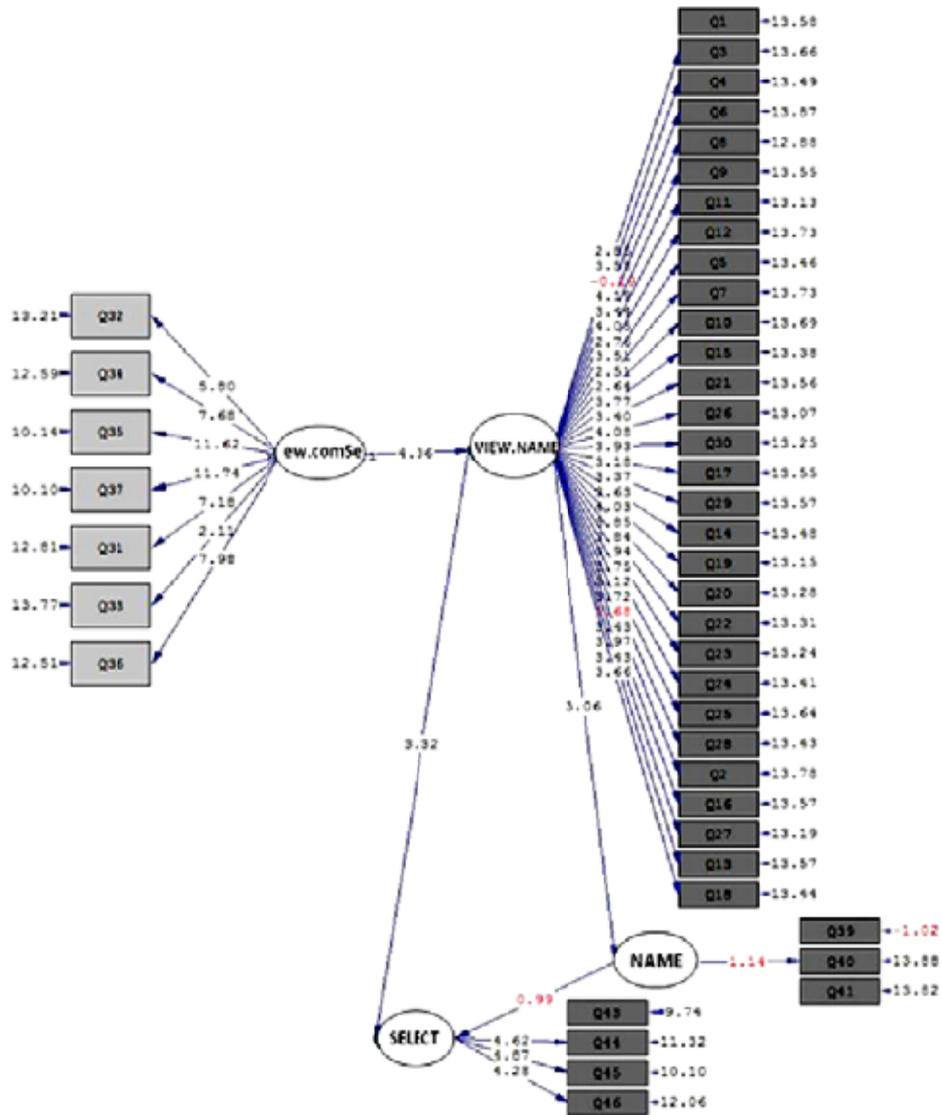
Figure 5. t-student statistics of the research contextual model

Attitude toward company

1-Number of service providers
2-Number of Selling centers
3-Price variety
4-Positive attitude toward producer country
5-Various payment conditions
6-Guarantee and warranty
7-Company advertisement compared to other components

Attitude toward brand

1-Connecting to printer capability
2-Media recommendation
3-Connecting to the Internet
4-Accessories
5-Varied designs
6-TV advertisement
7-Beautiful appearance
8-Varied colors
9-Good image
10-Participating in the lotteries
11-Application usage Easiness
12-The possibility of Installing desired soft wares
13-Attractiveness
14-Low harmful ray and wave radiance
15-High-quality camera
16-Being famous
17-Data transfer using Bluetooth
18-Reference groups recommendations (friends, work-mates, family members and etc.)
19-High quality(complying expectations)
20-Battery charge saving duration
21-Small volume
22-Lightness
23-Physical durability and solidity
24-Data transfer through Infrared

Product selection

1-brand selection repetition (purchase)
2- recommending the brand to others
3- selecting other products from the same brand(generalizing the brand)
4-the will to pay more for a brand

Figure 6. The issued model according to the research findings