A Selective Optimal Choice Pattern For Consumer Behavioral Perspective In E-Environment

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Abstract: Consumer behavior is the activities to acquisition, use and disposal of goods and services. In this article, there will be a study about investigation into key points of consumer behavior, introduction of consumer analysis cycle. As a result we developed a mind-construct of consumer model in E-environment includes the presentation of mind-construct formation and its influence on E-environment, and communicational behavior of consumer in E-environment. It is very effective to recognize the mind-construct of the consumer and effective factors on its formation in Web design and consumer search process to increase the efficiency rate of the sites and encourage consumers to buy them.

Key words: consumer behavior, E-environment, mind-construct.

INTRODUCTION

E-marketing environment enables consumers to search for information and to purchase goods and services through direct connection to the electronics shops. E-purchase is not based on the actual experience of goods, but it is based on such as image, form, information and advertising. Thus, acceptance and doing electronics purchase depends on consumers’ communication and interaction with sites. Beyond each purchase there lays an important process of decision making. The stages that a consumer passes to decide what kind of goods and from which site to purchase, depends on the consumer mind-construct as well as stimuli that the marketers use to focus the consumer's mind on the purchase. After a long period in which consumers were assumed to make largely rational decisions based on utilitarian product attributes and benefits, in the last two decades, marketing scholars have started to study emotions evoked by marketing stimuli, products and brands (Holbrook and Hirschman, 1982). Many studies involving consumer emotions have focused on consumers’ emotional responses to advertising (e.g., Derbaix, 1995), and the mediating role of emotions on the satisfaction of consumers (e.g., Phillips and Baumgartner, 2002). Emotions have been shown to play an important role in other contexts, such as complaining (Stephens and Gwinner, 1998), service failures (Zeelenberg and Pieters, 1999) and product attitudes (Dube et al., 2003). Emotions are often conceptualized as general dimensions, like positive and negative affect, but there has also been an interest in more specific emotions. Within the latter stream of research, some researchers use a comprehensive set of specific emotions (Richins, 2005; Ruth et al., 2002). Other researchers concentrate on one or several specific emotions, such as surprise (e.g., Derbaix and Vanhamme, 2003), regret (e.g., Inman and Zeelenberg, 2002; Tsiros and Mittal, 2000), sympathy and empathy (Edson Escalas and Stern, 2003), embarrassment (Verbeke and Bagozzi, 2009) and anger (Bougie et al., 2003; Taylor, 1994). Despite this emerging body of research, progress on the use of emotions in consumer behavior has been hampered by ambiguity about two interrelated issues, viz., the structure and content of emotions (Bagozzi et al., 1999). First, with regard to structure, some researchers examine all emotions at the same level of generality (e.g., Izard, 1977), whereas others specify a hierarchical structure in which specific emotions are particular instances of more general underlying basic emotions (Shaver et al., 1987; Storm and Storm, 1987). Second, and relatedly, there is debate concerning the context of emotions. Should emotions be most fruitfully conceived as very broad general factors, such as pleasure/arousal (Russell, 1980) or positive/negative affect (Watson and Tellegen, 1985)? Alternatively, appraisal theorists (see, e.g., Frijda et al., 1989; Roseman et al., 1993; Smith and Lazarus, 1993) argue that specific emotions should not be combined in broad emotional factors, because each emotion has a distinct set of appraisals. The confusion concerning structure and content of emotions has hindered the full interpretation and use of emotions in consumer behavior theory and empirical research (Bagozzi et al., 1999).

Review On The Model Components:
2.1 Consumer Behavior:
Physical, emotional and mental activities used by individuals when they select, buy, use and dispose goods and services to meet their needs and desires, is interpreted to consumer behavior. In other words, consumer
behavior is activities to gain, use and disposal of goods and services directly. These activities also include decisions made before and after them.

2.2 Key factors of Consumer Behavior:
- The consumer behavior is motivated. In other words, generally consumer behavior is to achieve a specific goal.
- The consumer behavior is focused on activities. In addition, it can distinguish between intentional and accidental activities. Some activities such as talking to consumers and purchasing decision are intentional behaviors. On the other hand, accidental activity happens when, for instance, a person enters a shop to purchase special goods, and purchases another thing that he/she was not going to buy.
  - The consumer behavior is a process. Selection, purchase, use and disposal of goods have implications on the process of consumer behavior. Generally, the process of consumer behavior involves three stages related to activities before purchasing, activities of purchasing, and activities after purchasing.
  - The consumer behavior should be analyzed from the aspects of time and complexity. The complexity is the total activities and difficulties of making a decision. Time and complexity directly relate together. It means that with regard to the fixed other factors, if a decision is more complex, more time would be spent on it.
    - There are at least three main roles in the process of consumer behavior:
      o A: Effective
      o B: Buyer
      o C: User
  - The consumer behavior is influenced by external factors. It is greatly affected through external forces such as culture, reference groups, family, etc. The consumption behavior differs from person to person. Different people due to individual differences show different consumption behaviors. Therefore, the marketers attempt to share market (Golchinifar 2009).

2.3 Substantial factors of Consumer Behavior:
There are three substantial reviews of consumer behavior which offer guidance about effective factors on behavior of consumers:
- Decision review: In this review, the consumers are rational decision makers. This approach reviews how the consumers find a special issue and try to solve it. The stages include finding problem, research, evaluation, selection and survey after acquiring.
- Experimental review: In this review, the consumers are not perfectly rational decision makers. Sometimes they buy goods and services for entertainment, fantasy, emotions and feelings. This review is based on motivational psychology, sociology and anthropology.
- Behavioral review: In this review, environmental forces lead the consumer to a way that he/she purchases a product without pre-made strong feelings and beliefs. In fact, his/her purchase is due to direct impact of environmental forces such as sales promotion tools, cultural norms, economical pressures, etc. Most of the purchases have some elements of each of the three above mentioned perspectives.

2.4 Consumer Analysis Cycle:
Consumer analysis cycle presents a framework for consumers' study, analysis and perception. This cycle have three components:

![Consumer analysis cycle](Peter, 2004)

2.5 Emotion and Cognition:
Emotion and cognition refer to inner reactions the consumers show in replying to issues and events in the environment and toward behaviors. The impact of factors is different in the formation of consumers' emotions
and cognition. Some "emotions" are motivated, positive and desirable (love, joy, peace, etc.) while some are negative and undesirable (ill, anger, fear, etc.). Motivated emotions sometimes are more intense such as love or anger, whereas some others are less intense like despair or satisfaction that leads to statements such as "I like McDonald's potatoes". "Cognition" refers to knowledge and intellectual processes; they are formed through replying to environmental factors. Cognition includes individuals' knowledge and beliefs gained from their experiments and will lead to the formation of attitudes and types of decisions. Some of the cognitive processes are conscious while some are unconscious. Marketers should ask questions such as the following in order to understand the consumers' "emotions and cognition" and do research about them:

- How do consumers interpret the information about products, stores and advertising?
- How do consumers select goods and brands among groups?
- How do consumers evaluate the process of selecting types of goods and brands?
- How will the memories affect the consumers' decision?
- How do consumers interpret the advantages and benefits of various suggestions?
- Why do consumers prefer some goods and services over others?
- How will marketing strategies affect the consumers' emotional and cognitive responses? Etc.

### 2.6 Behavior:

Behavior refers to the usual actions of consumers such as watching a television commercial, visiting a store, or purchasing a product. Behavior is related to what the consumer really do while the emotion and cognition is related to the consumer's inner and intellectual status. Typical questions that marketers should ask in analysis and cognition of consumer behavior are:

- What are the classical theories of behavior and how can marketers use them to affect the consumer behavior?
- What are the applied behavioral theories and how they can be used in order to influence the consumer behavior?
- How does the indirect learning occur and how can marketers use it?
- Which of the consumer behaviors are more considered by marketing managers?
- To what extent can the behavior be controlled through marketing activities? Etc.

### 2.7 Environment:

Environment includes objects, places, goods and other people who influence consumer's cognition, emotion and behavior. Typical questions that marketers should ask about cognition and impact of environment on the consumer are:

- Which environment will the consumer behavior study?
- How does the environment affect consumer behavior, emotion and cognition?
- How the effects of culture on consumers are evaluated?
- What impact families have on consumers? Etc.

The marketers can evaluate the consumer behavior based on three stages of analysis cycle. These three factors interact with and affect each other, so cognition and perception of the consumer behavior requires considering all factors. Goods, packaging, advertising, price, brand, stores, etc. all are physical and mental stimuli that marketers take advantage of them to impact consumers. Thus, marketing strategies are based on the analysis of consumer behavior. (Peter.2004,17-20)

### Propose Model:

#### 3.1 Mind-Construct of the Consumer model:

Specific cognitive trends, that occur by defined and separated characters and have different types, form individuals' mind-construct. Each mind-construct is related to different mind concepts and several types of information processing. The Consulting mind-construct is based on individual's trend to collect and process the relevant information about issues. The consumer, who has a trend to search information in various stages of decision-making, has the Consulting mind-construct. Pragmatist mind-construct is related to consumer's trend in concentrating on performance which occurs after the decision and helps to facilitate it in order to achieve the goal. Both mind constructs are goal-oriented. Without any specific target, the construct of consumer is Empiricist. Heuristic mind-construct is related to cognitive orientation of consumer to face with new experiences and to satisfy his/her curiosity. Gratifies is another type of mind-construct. It belongs to the people who are looking for joy not cognition. Mentioned mind-constructs are shown in figure 2.
Fig. 2:

The people can change their mind-construct when they face environmental factors. The consumer may start an experience with Gratifies mind-construct and finally reach to Pragmatist mind-construct. Sometimes searching in various sites by individuals can be such a process.

3.2 Mind-Construct of the Consumer in E-Environment:
E-environment is a space based on network. It provides a direct communication between consumers and producers and, also providers of information about goods and services.
E-environment has the following qualities:
- E-environment is very challenging for many consumers and searching it would be a skill experience for them .
- The consumer in this environment will experience non-stop searching whereas shopping centers and TV advertising are not available in specific hours .
- People immediately receive feedback from e-environment search process which makes the search more dynamic.
- In e-environment, searching behavior is completely under the control of consumer. In other words, a person can re-organize and re-schedule his/her search construct in this environment, he/she can refer to the desired site every time, and finally he/she will have high control on the search process.

The e-environment allows direct interaction and it creates mind images for the user at any time. In e-environment, the consumers change their behavior as getting more experienced. The gained experience can change some consumer's negative perception when they search more information on sites. It will increase their use of e-environment at the next purchases. Mind-construct is very important in the study of consumer behavior, because the concept of mind-construct includes individuals’ cognitive trends. E-environment can change these trends and, as a result, individuals’ mind-construct. Therefore, designing the e-environment, marketing managers can make changes in individuals’ mind-construct and move them toward the purchase. The potential consumer who refers to the ideal site just for pastime may change to actual consumer and purchase from the site. In other words, consumers will move their Gratifies and Empiricist mind-construct to Pragmatist.

3.3 Mind-Construct Formation and Influence Model:
The MCFI model expresses the role of mind-construct in structuring the consumer experiences in e-environment. The model indicates effective factors on mind-construct formation and its effect on consumer behavior in e-environment as following:

Fig. 3: Mind-construct formation and influence model
The consumer has various approaches as determined goals in e-environment. The goals may vary from gaining information about the price of a specific good to searching information about a product or meeting chat room. Some may be only for joy and passing good time. The consumers use their previous experience and knowledge when they search; experiences about visiting various sites or the searches about special brands in the past. The consumer's emotional and excitement states also are important in mind-construct formation. In MCFI model, the three factors of goals, knowledge and experience form emotional and excitement states of the consumer mind-construct. The consumer will search in an e-environment. For example, a user is going to perform her/his bank activities through electronics and in e-environment. His/her overcoming construct at the beginning of search is Pragmatist and centralized, whereas another user looking for a gift for her/his friend through searching the sites, he/she may start searching based on Consulting mind-construct and focus on gaining and collecting information from various sites to choose among of them. The consumer mind-construct is effective on various aspects of searching in e-environment and determines which sites to visit, how much time to spend searching each site, and what information to search, etc. A consumer with Pragmatist mind-construct who follows for e-bank activities, first visits sites related to the bank and searches for related information about his/her bank accounts, etc., and the search ends. Whereas the consumer looking for a birthday gift will visit several sites and search in various product groups and compare them. Mind-construct is effective to evaluate the experiences in e-environment and provides an image from a specific site, a commercial brand or a special company. The user who follows for bank activities and has Goal-oriented mind-construct, in the process of search may face with an attractive commercial advertising on the site of the respective bank and be encouraged to click on it, therefore his/her mind-construct will change from Pragmatist focus on the goal to Empiricist mind-construct. So, e-environment's characters can change individuals' mind-construct and affect his/her next searches in e-environment. Therefore, this model explains the consumer's behavioral differences in e-environment.

3.4 Mixed E-Marketing:
Mixed e-marketing is a main concept that determines techniques and tools using which marketers can create value for their consumers. Denis has chosen seven factors for mixed e-marketing:

**Convenience For The Consumer:**
Convenience refers to main aspects of the web site such as having a search function, site layout and convenience in purchase.

**Consumer Value & Benefit:**
Nowadays, electronics sellers should try to provide the maximum value for their consumers and according to this, electronics retailers should express products from the aspects of value and benefit for their consumers.

**Cost To The Consumers:**
The consumers can consider price as a cost. When purchasing, the price should be less than the existing prices in all stores and, also the exact costs of shipping and deliveries must be considered.

**Consumer Relationship & Communication:**
In communications, the company has a close relationship with consumers and the consumers’ feedback is studied. Electronics stores can respond to this need through designing beautiful 3dimension sites with soothing music.

**Category Management Issue & Computing:**
The success of electronics sellers depends upon the supply of goods consumers request with desired size and quantity in desired time and place. Consumers have certain sensitivity to the arrival of goods, delivery location, product type and size.

**Consumer Franchise:**
Many sellers believe that the total values of goods, including product mind image, fame and brand affects consumers' selection. Famous brands have more fans on the electronics.

**Consumer Care & Service:**
Electronics stores need to offer superior service tools such as fast and timely delivery, access to telephone support, and facilities of goods referral and replacement. Since there is no sales staff at these stores, they should provide help with tools such as one-click telephone support and chat room for consumers in order to form a desired experience of interactive shopping. (Dennis, 2004). Many studies have considered characteristics of E-services and classified these characteristics in to four groups:
1. Goods (products)
2. Communication
3. Convincing and guidance
4. Safety

**Goods:**

is related to product characteristics such as classification, diversity and information. Classification of goods can increase the consumer's satisfaction, but all goods in commercial catalog or real stores may not be available on electronics. The main goal in electronics stores is providing information about goods and their price in order to help consumer to decrease the search time. These stores can help buyers through offering extensive information about goods, price comparisons in all stores, summary of product (such as summary of a book in an electronics bookstore), and through display of goods (such as transmission and storage in software)

**Communication:**

The consumers want accurate, continuous and effective communication and Geographical protections. These characteristics are effective to determine consumers' behavior in e-environment. Providing service to consumers involves sites' informing to select goods, responding to the consumers' questions, and providing transportation costs and product discounts information.

**Convincing and guidance:**

It is related to consumers' communication with the electronics stores. Users' relationship with electronics stores influences the experience of consumers' interaction with the providers of goods and retail services. If a communicational system is designed considering consumers' ease of search, it would help the consumer to decrease the cost of search by reaching minimum required time to select and buy. When the sellers' sites are of high speed, non-mass and easy to access, electronics shopping is appropriate and satisfactory. Easy to access and non-mass sites reduce sales time and decrease consumers' attempt.

**Safety:**

The consumers have concern about the disclosure of their financial and private information. However, many sites of electronics sales apply the personal protection and privacy policy and ensure the safety of exchange, while they never provide detailed information about how exchanges and personal information have the necessary security. (Dennis, 2004)

3.5 Consumers' Communicational Behavior in E-environment:

Use of related behavior elements to become more effective in decision making, decreasing the costs of information processing, having access to more cognition based on their decisions, and reducing the selection risk, are now consumers' trends in e-environment. After several successful exchanges, the consumers trust to service providers and suppliers of goods. They know that these virtual companies are able to provide their needs and demands; so they will commit to them. E-environment helps consumers to spend less time for decision making through providing a wide selection, information evaluation, accuracy and comparison of goods. E-environment provides a comparison and evaluation of information and can reduce the cost of information processing and effort to purchase decision. Although electronics consumers interact with computer systems and they can't touch and feel real goods physically, they can make e-decision through using provided information by e-stores. (Wind, 2006, 165-174). So, the discussion about important factors in consumers' buying behavior in e-environment needs to focus on data availability. The success in e-buying is related to the ability to use information for predicting and satisfying consumers' needs. The main elements needed to encourage consumer for electronics buying is to decrease the costs of information search and increase the ability to predict. There are many interests for consumers in the e-environment such as saving time, increasing facility, and decreasing the risk of dissatisfaction. According to studies, the quality of consumers' information and communication affects satisfaction of consumers. Provided information by e-stores are divided to information about goods and information about services. Information about goods includes goods signs, advice to consumers, and evaluation reports. Service information includes information about members, delivery and presentation of goods, and advertising. Goods and service information must be relevant, new, sufficient, pleasant, and comprehensible. To satisfy consumers' information needs, the information must be up to date, sufficient, simple and comprehensible. The purchase in e-environment can be affected by a poorly designed site. Therefore, it is necessary to consider the effect of different projects on the consumers search process.

**Summary of Hypotheses and Result:**

H1: The higher the risk tolerance the higher acceptance level towards high-risk in E-environments.
H2: Consumer’s level of experience in E-environments reduces perceived risk thus affecting his/her adoption in E-environments.

Data Collection:
the data were collected from electronics users. The target population for this study was defined as individuals who owned individual email accounts because they represented most of the electronics users. The main source of the individual users’ list came from various education, government and corporate institutions. Due to the nature of work that people do in these institutions, which requires the use of the Electronics, most users can be found in these institutions. Letters seeking permission to access the institution’s list of users’ database were sent out to 15 universities and colleges, 10 government and 50 corporate institutions. A personally administered survey was employed in this study so as to obtain a higher response rate (since the questionnaires were collected immediately once they were completed). The questionnaire consisted of three sections Section A consisted of demographic information such as respondent’s age group and income level. Section B consisted of general information about respondent’s Electronics activities: types of activities conducted and years of experience while Section C was designed to assess consumer opinions about Electronics usage. Using a 5-point Likert scale (1 = ‘Strongly disagree’ to 5 = ‘Strongly agree’) respondents were asked to respond to questions such as ‘I use the Electronics to communicate with friends and others’, ‘I prefer to be able to personalize a Web page’ and ‘I like to purchase product/service on the Electronics’. A total of 626 (62.6%) responses were collected, however due to invalid and missing responses only 547 (54.7%) were usable for analysis. Respondents were almost evenly split by gender (50.1% were male and 49.9% female). Most of the respondents were 21 to 30 years of age (51.4%), followed by the age groups of 31 to 40 and below 20 years at 28.5% and 10.2%, respectively. 48.6% of the respondents had spent at least 15 years in education. As to the Electronics usage profile, majority of the respondents spent less than 30 hours per week (56.9%) while 26.9% of the respondents spent more than 40 hours per week on the Electronics. Most of the respondents were experienced users who have been using the Electronics for more than 5 years (55.4%)

Communication Tool:
Email, Consumer service helpdesk, Online chat room, Bulletin board, Check product/service availability, Web form = 0.84 Cronbach Alpha

Transactional Tool:
Make online payment, Purchase product/service online, One-stop shopping = 0.79 Cronbach Alpha

Table 1: Results of hypothesis 1 test
<table>
<thead>
<tr>
<th>Effect</th>
<th>Main Effects</th>
<th>F</th>
<th>p-value</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Info search</td>
<td>0.858</td>
<td>0.948</td>
<td>0.137</td>
<td>0.999</td>
</tr>
<tr>
<td>Reservation</td>
<td>0.849</td>
<td>1.095</td>
<td>0.944</td>
<td>0.999</td>
</tr>
<tr>
<td>Banking</td>
<td>0.931</td>
<td>1.167</td>
<td>0.083</td>
<td>0.940</td>
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</tbody>
</table>

Table 2: Results of hypothesis 2 test
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<th>F</th>
<th>p-value</th>
<th>Power</th>
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<tbody>
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<td>0.618</td>
<td>0.988</td>
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<tr>
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<td>1.701</td>
<td>0.011</td>
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</table>

The table 1 indicate that consumers who use the Electronics for information searching, online reservation and online banking are not significantly different in their perceptions towards Electronics activities. Ironically, although consumers who perform online banking are actively using the Electronics to transfer money and make online bill payments they tend to be less willing to purchase product/service. Hence, H1 cannot be safely accepted. Table 2 illustrates the results of H2 testing. In this hypothesis, Electronics activities (information search, online reservation and online banking) are the dependent variables while the numbers of years using the Electronics (ranges from 6 months to more than 5 years) are the independent variables. From the table, online banking consumers are significantly different from other groups of users. Hence, it is evident that as consumer gains more experience using a technology, his knowledge about the technology capabilities and potential harm arising from its usage helps to reduce ambiguity and removes unnecessary fear. Hence, H2 is supported.

Conclusion:
With the expansion of electronics increasingly in various aspects of life, there have been done many researches in support of encouraging consumers to buy in e-environment. Based on features of the e-environment and behavioral characteristics of consumers to facilitate the buying process, the reasons which cause lack of consumers’ confidence and prohibits consumers’ purchases in e-environment must be investigated and resolved. Relying on the characteristics of being challenging and analyzable, possibility to receive feedback
in good time, establishing interaction system, and creating mind images in e-environment, can get consumers focus their mind-construct on purchasing on electronics and can also guide their purchase decision process.

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