A study into the effects of cultural factors on consumer’s behavior in the information and communication technology industry (Case study of mobile phone)

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ABSTRACT
Looking at markets at global level, every country has its own norms, traditions, and habits. If we look at market at nation level, every market is different from other market in that it has its own norms, traditions and habits which influence individuals’ purchase behavior in a given market. If selling company fails to undertake a thorough investigation into how buyers think about their target market and how buying behavior should be and how to use company’s products, they will encounter astonishing situation in which they have to pay huge costs. The present applied research concerns Management and Economy students of Islamic Azad University (Science and Research Branch). The sampling method of the study is a stratified random method. For variable measurements, a questionnaire was used; the reliability of the questionnaire was measured by Cronbach’s alpha, the amount of which was obtained 93 percent, indicating an acceptable reliability. For field operation part, a number of 246 questionnaires were completed. Non-parametric methods were also used for data analysis, and then the validity and reliability of the questionnaire were measured and confirmed. In this regard, the value of Cronbach’s alpha was obtained 93 percent, which indicates an acceptable reliability of the questionnaire. For inferential and testing hypothesis part, we used Kolmogorov-Smirnov, Spearman, structural equation modelling and Friedman. The results of hypothesis test led to the rejection of a number of hypotheses and significance of the relationship between variables. In the end, using structural equation modelling, researcher’s proposed model was fitted.

1. Introduction
The exploration of the effect of cultural effect is a sub-discipline of international marketing which addresses globalization and localization topics, suggesting that every market values diversity, in that each country utilize marketing techniques compatible with that market, because social processes is different from one culture to another. Investigation into important aspects of culture and its effect on consumer behavior have led many people to make better decisions on the standardization of marketing programs. Some research focuses on the effect of culture on consumer behavior, while many studies deal with the comparison of consumer behavior between two countries. Although a number of studies have reported important and significant discrepancies in preferring products or reacting to marketing mix, the application of the structured results is difficult for marketers. Moreover, such models as Clark and Sheth and Sethi failed to properly demonstrate the relationship between culture and consumer behavior (Lee, 2000: 126-117).

2. Research objectives
The main aim of the research is to explore the effect of cultural factors on consumer behavior through testing related cognitive processes.

The in-depth objectives of the research are as follows:
- Investigation into the effect of cultural factors on consumers’ buying intention
- Investigation into the effect of cultural factors on attitude to consumers’ buying
- Investigation into the effect of financial ability to buy on consumers’ buying intention

3. Research hypotheses
1. Factors of shopping attitude, return expectations and financial ability to buy significantly influence buying behavior.
2. Factors of buying feedback, self-explanation, return expectation, buying effect and attitude toward product significantly influence attitude to buying.
3. Factors of previous experience, understanding of situation and financial ability to buy significantly influence attitude toward product.
4. Factors of previous experience, understanding of situation and financial ability to buy significantly influence self-explanation.
5. Factors of previous experience, understanding of situation and financial ability to buy significantly influence buying behavior.
4. Research variable

More than 65 years ago today, the concept of social distance came into existence in order to evaluate the effect of cultural exchange or cultural conflict. Bogardos (1940) described social distance (social difference) as a concept that deals with a coordinated and disciplined behavior seen among people. Although the concept was used in a variety of contexts such as social difference in rural life (Binneweit, 1956; Cited in Anderson 1983), social differences in Shakespeare’s play (Bogradus, 1934), and social differences between children and their parents (Duvall, 1937, cited in Anderson 1983).

In his study, Karjaluoto (2000) believes that belief is actually a set of individuals’ descriptions of different things in that individual’s faith and sensations is gradually founded on science and beliefs. Belief shapes individual’s attitudes and attitudes in turn exhibit behaviors in individuals. Consumers invoke a certain image of product or service based on their attitudes, which serves as a foundation for their behavior. Since beliefs are fueled on the basis of different environmental information, consumers will hold different beliefs given the information received from the environment (Karjaluoto, 2000, p1).

Timmins (2006), in his study, holds that individual’s attitudes are under the influence of his belief and evaluation of given phenomena, i.e. his beliefs are gradually encouraged after information process and recognition acquisition. According to this, individual’s positive or negative attitudes are shaped, which influence his imagination and intention; the imagination build on individual’s behavior. On the other hand, normal and usual beliefs influence normal subjects along with motivation, which in turn influence individual’s imagination (Timmins, 2006: 3).

Lee et al (2006) conducted a study in Hong Kong, they believe that consumer’s mental frame model which was proposed by Bin and Ajzen concerning belief, attitude and behavioral objectives is a framework widely used in embracing the internet. The framework exhibits that some attitudes depend on the direct effect of beliefs; likewise, attitudes have positive and direct effect on behavioral objectives. Attitudes can be defined as an acquisitive readiness to respond to account for desirable or undesirable behaviors given a topic. Individual attitudes toward a subject are generally determined by a set of ideas about the subject. However, research has shown that only few theories can be used any time as factors determining attitudes. On the contrary, attitudes relating to a subject are associated with individual behavioral objectives. Given the findings about the introduction of information technology, consumer-oriented research on e-commerce indicate that attitudes have an important, direct, and positive effect on behavioral objectives of internet shopping. Behavioral objectives are associated with mental probabilities of an individual who attempts to do something (Lee et al, 2006: 6).

As for Iran, research conducted on consumer behavior is holistic, because there is none in this regard. However, the only work that somewhat resembled the present study is study of contributing factors customers’ preferences as to selection of TV using a hierarchical process (case study of Isfahan), which was conducted by Sanayei, Por Halgh, and Ketabi in fall 2004.

5. Research literature

5.1. Explanations of consumer behavior

Consumer behavior includes all of physical, biological, sensational and mental activities that individuals are involved in so as to meet their needs at time of selecting, buying, using and disposing of used products. In another definition, consumer behavior is defined as follows: aiming at fulfilling needs and demands of different people and groups, consumer attempts to explore processes that influence time of selection, purchase, and use of products, services, ideas and experiences (Solomon, 1990: 5).

American Marketing Association defines consumer behavior as follows: dynamic influential interaction, understanding, behavior and environment direct individual’s aspects of life through every person.

Consumer behavior can be defined in this regard and dynamic influential interaction and recognition, behavior and environmental accidents can direct individual’s aspects of life transactions; in this account, there are at least three important points:

1. Consumer behavior is a dynamic state
2. Consumer behavior includes interaction between effects and recognition, behavior and environmental accidents.
3. Consumer behavior deals with exchange

6. Triple views on consumer's decision-making

There are three different views—economic view, psychological view, and behavioral view—which were proposed by previous researchers in order to give an account on consumer’s decision-making (Crozier & Ranyard, 1997).

6.1. Economic view

From this view, consumer is viewed as a rational person who take rational decisions within theoretical discussion in a complete competition space. Economists believe that consumers are aware of all information and available alternative products. It is assumed that consumers prioritize all alternatives in terms of profit and loss, and then choose the best option for purchase (Tversky, 1996).

6.2. Psychological view

From this view, consumers are irrational decision-makers, impulsive persons (those who act out of impulsion and without prior thinking) and passive persons who are totally vulnerable and subject to external variables affecting their decision-making. Psychologists hold that consumers are not perfect and flawless decision-makers as their minds are limited to the amount of information that they are able to understand, store and retrieve them. Therefore, they assume that consumers utilize some sort of mental shortcuts such as cognitive inventions at time of decision-making. Scientific evidence demonstrate that the cognitive inventions are substantially correlated with covert values of products interesting consumers; the covert values exert substantial effect on consumer’s buying decision-making. However, psychological view largely overstates the irrationality and impulsion of consumer’s buying decision-making, in that mere reliance on the use of the model has been diminished concerning the study of consumer’s decision-making since 1970 (Zaichkowsky, 1991).

6.3. Behavioral view

Behavioral researchers examined consumer from a cognitive perspective. In this view, consumer is seen as a problem solver who is actively in pursuit of information relating to product consistent with their needs. Consumer’s decision making in which people are in search of information acquisition and evaluation concerning their selected products, brands and stores is the center of attention in this approach. In this view, consumer perform a series of mental activities from taking effect of stimulus to the time of response (Crozier & Ranyard, 1997).
7. Testing research hypotheses

7.1. The first hypothesis of the research

1. Attitudes toward purchase, return expectations and financial ability to buy significantly influence buying intention.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Influential variables</th>
<th>Attitude to purchase</th>
<th>Return expectations</th>
<th>Financial ability to buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying intention</td>
<td>Spearman correlation coefficient</td>
<td>.123</td>
<td>.120</td>
<td>-.066</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>.054</td>
<td>.061</td>
<td>.301</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>247</td>
<td>247</td>
<td>247</td>
</tr>
</tbody>
</table>

Given the amount of calculated probability, the influence of “financial ability to buy” on self-explanation is considered significant. Therefore, the research hypothesis about the variable is confirmed.

7.2. The second hypothesis of the research

2. Purchase feedback, self-explanation, return expectation, buying effect and attitude to product significantly influence attitude to purchase.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Influential variables</th>
<th>Purchase feedback</th>
<th>Self-explanation</th>
<th>Return expectation</th>
<th>Buying effect</th>
<th>Attitude to product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying intention</td>
<td>Spearman correlation coefficient</td>
<td>.165</td>
<td>.162</td>
<td>.102</td>
<td>.075</td>
<td>.411</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>.009</td>
<td>.011</td>
<td>.108</td>
<td>.238</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>247</td>
<td>247</td>
<td>247</td>
<td>247</td>
<td>247</td>
</tr>
</tbody>
</table>

Given the amount of calculated probability, the influence of “purchase feedback” and “attitude to product” and “self-explanation on attitude to purchase is found to be significant. Thus, the research hypothesis about the three variables is confirmed.

7.3. The third hypothesis of the research

3. Previous experience, understanding of situation and financial ability to buy significantly influence attitude toward product.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Influential variables</th>
<th>Previous experience</th>
<th>Understanding of situation</th>
<th>Financial ability to buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude to product</td>
<td>Spearman correlation coefficient</td>
<td>.013</td>
<td>.206</td>
<td>.127</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>.834</td>
<td>.001</td>
<td>.046</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>245</td>
<td>247</td>
<td>247</td>
</tr>
</tbody>
</table>

Given the amount of calculated probability, the influence of “understanding of situation” and “financial ability to buy” on attitude to product is considered significant. Therefore, the research hypothesis about the two variables are confirmed.

7.4. The fourth research hypothesis

4. Previous experience, understanding of situation and financial ability to buy significantly influence self-explanation.

### Table 4. Results of the fourth hypothesis test.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Influential variables</th>
<th>Previous experience</th>
<th>Understanding of situation</th>
<th>Financial ability to buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-explanation</td>
<td>Spearman correlation coefficient</td>
<td>.048</td>
<td>.084</td>
<td>.770</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>.454</td>
<td>.186</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>245</td>
<td>247</td>
<td>247</td>
</tr>
</tbody>
</table>

Given the amount of calculated probability, the influence of “financial ability to buy” on self-explanation is considered significant. Therefore, the research hypothesis about the variable is confirmed.

7.5. The fifth hypothesis of the research

5. Previous experience, understanding of situation and financial ability to buy significantly influence buying.

### Table 5. Results of the fifth hypothesis test

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Influential variables</th>
<th>Previous experience</th>
<th>Understanding of situation</th>
<th>Financial ability to buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying effect</td>
<td>Spearman correlation coefficient</td>
<td>.063</td>
<td>.194</td>
<td>.155</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>.329</td>
<td>.002</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>245</td>
<td>247</td>
<td>247</td>
</tr>
</tbody>
</table>

Given the amount of the calculated probability, the influence of “understanding of situation” and “financial ability to buy” on buying effect is considered significant. Therefore, the researcher’s hypothesis about the two variables are confirmed.

8. Results of research hypotheses test

A summary of the statistical results of the research hypotheses is presented as follows:

The first hypothesis is “attitudes toward purchase, return expectations and financial ability to buy significantly influence buying intention”. Given the amount of calculated probabilities in the above table, none of the research hypotheses included in this group cannot be confirmed at significance level of 95%. However, the influence of “attitude to purchase” with 0.123 correlation coefficient and “return expectations” with 0.120 correlation coefficient on buying intention is significant at significance level of 90%, i.e. 10% level. Given the fact that, consumer’s buying behavior with regard to mobile phone product, buyer generally choose his intended model before purchase; this leads customers’ buying intention to be less influenced by other factors, given the fact that the market of this product varies greatly. Moreover, given the fact that males are more individualist than females, and since most of sample population is comprised of males, gender can be viewed as a determining factor in the foregoing relationship which can as an intervening variable reduce the effect of the relationship between variables. Indeed, qualitative and proper facilities have the highest effect on customers’ buying intention in this market.

The results of other studies internationally conducted in the US, Australia, South Korea, Singapore and Hong Kong in relation to buying camera indicate that attitude to purchase, return expectation and financial abilities have positive and significant effect on buying intention. In South Korea and Hong Kong where people are more collectivist, return expectations are more determining than other factors, while people are more individualists in the US, Australia, and Singapore where the influence of return expectation factor is less determining than other factors. The finding of the research on mobile phone purchase indicate that people of Iran are
more individualists and return expectation factor has less effect buying intention than other factors.

The second hypothesis of the research is “purchase feedback, self-explanation, return expectations, buying effect and attitude to product significantly influence attitude to purchase. Given the amount of calculated probability, the influence of “purchase feedback with 0.165 correlation coefficient and attitude to product with 0.411 correlation coefficient and self-explanation with 0.162 correlation coefficient on attitude to purchase is considered significant. Thus the researcher’s hypothesis about the three variables is confirmed. The insignificance of return expectations and buying effect on attitude to purchase can be explained in the sense that sense of satisfaction or dissatisfaction with prior purchase, “purchase feedback”, and sense of agreement or disagreement over product, “attitude to product”, and self-explanation “individualist reason” have the highest impact on people’s attitude to purchase, as other factors namely return expectation due to individualist reason and individual feelings during purchase “purchase effect have less effect on attitude to purchase, respectively. Moreover, since people had high level of education in the study sample, it can be stated that education level has a positive effect on the relationship between variables.

The third hypothesis of the research is “previous experiences, understanding of situation, and financial ability to buy significantly influence attitude to product”. Given the amount of calculated probability, the influence of “understanding of situation” with 0.206 correlation coefficient and “financial ability to buy” with 0.127 correlation coefficient on attitude to product is considered significant. Thus the researcher’s hypothesis about the two variables is confirmed. The insignificance of previous experience with attitude to product can be explained, in the sense that getting access to information through relatives, magazines, etc., has no great effect on individual attitude in relation to product and product features due to the individualist characteristic of Iranian people; and the two factors, “understanding of situation” and “financial ability” have greater effect on attitude to product.

The fourth hypothesis of the research is “previous experience, understanding of situation, and financial ability to buy significantly influence self-explanation. Given the amount of calculated probability, the influence of financial ability to buy with 0.77 correlation coefficient on self-explanation is considered significant. Thus the researcher’s hypothesis about the variable is confirmed. Moreover, since the age of sample people is at a rational level, age factor can be regarded as a positive determining factor in the above relationship.

That is to say, individual’s buying power has the greatest effect on the way of purchase and individual’s idea about purchase, “self-explanation”, and getting access to information through relatives, magazines, etc., due to the individualist character of Iranian people, and facilitating conditions surrounding purchase, “understanding of situation, had less effect, respectively.

The fifth hypothesis of the research is “previous experience, understanding of situation, and financial ability to buy significantly influence buying effect. Given the amount of the calculated probability, the influence of “understanding of situation” with 0.194 correlation coefficient and “financial ability to buy” with 0.155 correlation coefficient on buying effect is considered significant. Thus the researcher’s hypothesis about the two variables is confirmed.

That is to say, the conditions surrounding and facilitating “understanding of situation” and individual’s financial ability “buying power” have the greatest effect on buying effect, respectively, and can lead individual to buy emotionally; however, previous experience, getting access to information on purchase through relatives and magazines, etc., are less likely to make individual buy emotionally.

9. Research suggestions

9.1. Considering the results of testing research hypotheses and fitting structural equation modelling, the following suggestions are presented

* Given the influence of attitude to product factor, mobile phone business owners are recommended the following suggestion:
  - Emphasizing quality and brand and promoting product brand name
  - Emphasizing quality and using products extensively

* Given the influence of purchase feedback factor, mobile phone business owners are recommended:
  - Manufacturing products that make customer happy or satisfied with purchase, i.e. the value obtained for customer is greater than the price paid for the product.

* Given the influence of understanding of situation, mobile phone business owners are recommended:
  - Offering products with different features and diverse price range
  - Offering services to former customers
  - Offering after-sales services and customer relationship management system

*Given the influence of self-explanation factor, mobile phone business owners are offered the following suggestions:
  - Offering advertisements and invoking a special image for every kind of mobile phone

* Given the influence of previous experience factor, mobile phone business owners are offered the following suggestions:
  - Offering collective purchase plans with discount or discount coupons for future purchases

* Given the influence of buying effect factor, mobile phone business owners are offered the following suggestions:
  - Offering purchase facility conditions such as cash discount, seasonal discount, installment, etc.

9.2. Suggestions considering the results of factor rating

Given the significance of determining factor rating in customer’s purchase, it is recommended that mobile phone business owners interest customers to buy the intended brand name by emphasizing the main determining factor “good coverage” in producing and continuing in parallel with product advertisement.

9.3. Suggestions for future research

Given the research title, the following suggestions are offered for future research:

Given the fact that the present study is a quantitative-type research, it is recommended that qualitative study is conducted using thorough interviews and panel groups in order to identify customers’ behavior, the results of which can supplement the present research.
- Use of other customer and user behavior identifying models and use of other statistical analysis methods can offer good results, and comparing them with the results of the present study can offer good inferences.
- Implementing the research will be useful concerning other statistical population generalizable to the population.

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