Investigating Factors Influencing Impulsive
Buying: Consumer and Nondurable Goods
Case

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Abstract

Impulsive buying is one of the ways of buying in which there is a short time interval
between viewing the goods and deciding to buy them. Nowadays, the investigating of the
process of impulsive buying, as one of the methods of increasing sales rate, is prevalent in
many retail and production units. This research aims at investigating impulsive buying
constituents and also factors increasing impulsive buying rate with regard to consumption and
nondurable goods. This research is carried out using an applied approach in which a
questionnaire-based survey is carried out, with the consumers of consumption and nondurable
goods regarded as its source of data and information. A total of 384 usable questionnaires
were collected and analyzed utilizing correlation and regression analysis to establish the
relationships in the model. The results provide a more comprehensive perspective of
impulsive buying. Also, the results show that discount shopping, store’s layout and
decoration, having credit cards, as well as, income levels influence customers’ impulsive
buying, respectively.

Keywords: Impulsive buying; Nondurable goods; Store’s layout and decoration; Discount shoppin.

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1. Introduction
The ever-increasing competition has raised the importance of consumers’ behavior with the producers and sellers. Hence, identification of motives and process of buying has always been taken into account by experts and researchers. Generally, the buying process has various stages indicating how each buyer chooses and buys the intended goods, under the influence of various factors [17].

Yet, investigating of consumers’ behavior is not similar as regards all goods. In other words, consumers don’t follow equal patterns in buying all goods. They may follow some simpler patterns for some goods and follow more complicated patterns for others [11].

One of the prevalent ways of classifications of various types of goods is dividing them into durable and nondurable goods. As regards durable goods, the process of choosing and buying is more complicated with more stages, being more sensitively approached. Yet, with regard to consumer goods and nondurable goods, this issue can be adjusted. In other words, the process of buying consumer and nondurable goods versus the process of buying durable goods must be differentiated from each other. As regards the buying of consumer and nondurable goods, when the price of the products is not too high, they are approached with lower sensitivity by the consumers [10].

Also, consumer and nondurable goods are bought repeatedly. As a result, buyers have enough information about them [7].

As a general rule and taking into account the properties of consumer and nondurable goods, the investigating of factors influencing their purchase can be different from other goods. Besides the type of goods (nondurable / durable) that affect the buying process, the buying method can also influence the consumers’ decision to buy. Most of purchases are done with prior decision-making, yet some other purchases are done based on impulsive motivations. In this method, the consumer does not make a prior decision to buy, but he is inclined to buy as a result of momentary motives. This research is done aimed at investigating the two issues of impulsive buying of consumer goods, and identifying the factors influencing it.

2. Literature Review
The Concept of Impulsive Buying. Impulsive buying is a method in which there is a short time interval between viewing the goods and deciding to buy them. In other words, the stages of identifying the needs, collecting the information and assessing the choices are summarized or omitted in this method [18].

According to the other definition, another method of impulsive buying is introduced that is done with no prior decision or assessment, and it is just based on impulsive intentions. In impulsive buying, the assessment of the needs or the goods that are to meet the intended needs is not fully carried out [8].

Bayley, et al. introduced impulsive buying as an abrupt buying behavior being of a complicated epicurean level where the buying speed is much higher than that of the normal buying. That’s because no time is spent on investigating other options and assessing the needs. Impulsive buying has generally three main specialties as follows (Ghaderi Abed, 2011):
- Without prior intention
- Without prior thought or assessment
- Done momentarily, i.e. there is not a long time interval between the viewing and buying of the goods.

Piron (1991) says in impulsive buying the momentary attractiveness is so high that the buyer summarizes, shortens or omits the assessment stage. In reality, each impulsive buying is done without prior intention; yet, each unintentional purchase is not necessarily an impulsive one. Impulsive buying is not done based on thinking, because it is done without making necessary assessments. One, who does impulsive buying, takes into account the outcomes of his purchase with lower probability [16]. Impulsive buying is also done immediately and quickly [2].

The time interval between viewing the goods and buying them is too short, and the decision to buy is made quite hastily. Impulsive buying is not put off for gathering information, comparing stores, getting counsel, etc. [14]

Hausman (2000) states that impulsive buying is an important source of income for retailers, and 30 to 40 percent of the purchases can be categorized as impulsive buying. Also two other researchers (Tafarodi and Swann, 2001) have acknowledged that impulsive buying is regarded as the subject of many marketing plans and the final target of many sales campaigns. This issue emphasizes the importance of impulsive buying as one of the fixed plans of stores and companies. Impulsive buying is generally of high importance from two aspects, and can be useful for the two groups of sellers (especially retail units) and customers (consumers). First, through investigating factors influencing impulsive buying and its motives, sales level of retail units, and stores can be increased. In fact, aided by the investigation of factors influencing impulsive buying and making use of these factors, customers can be encouraged to buy more goods of such units, leading to the increase of sales level [12].

On the other hand, consumers are always subject to impulsive buying motives, and spend some part of their incomes on buying those goods under the influence of momentary motives. As a result, studying impulsive buying can help consumers to control their impulsive buying behavior in a better way [6].

**Impulsive Buying Process.** In the impulsive buying process, purchase stages are fully changed, and most of the stages are summarized or omitted. Buying process, generally, includes the following stages: identifying the needs, gathering information, assessing the options, buying, and post-buying behaviors. Notwithstanding, in impulsive buying, stages one to three are weak or omitted. Stages of impulsive buying generally include viewing the goods, momentary motive being created, buying and post-buying behaviors [13].

It is noticed that, in the process of impulsive buying, no activity is carried out regarding identifying the needs. The individual might know his needs, but he has not surely thought enough to make the buying decision. Also, in the process of impulsive buying, the stage of collecting information has been fully omitted. The buyer may collect a little information on the goods or products right at that moment, yet, this information is not collected on the basis of the predetermined needs or prior decision. For example, some information may be transferred to the buyer by the seller at the very moment, but this information doesn’t represent the information transferred during the process of normal buying [20].

Also, in the process of impulsive buying, the options are not really assessed. In fact, when the individual has not systematically identified his needs, how can he
identify options available to assess and compare them? Hence, in the process of impulsive buying, there are not many options for the buyer to choose from. Yet, there is always one option available, and the buyer chooses that option for various reasons [8].

Yet, as stated the process of impulsive buying starts with viewing and receiving visual information. First, the individual views the intended goods. The observation is perceived through some other information such as price, aesthetics and application, leading to the motivating of the buyer. In fact, one can state that in impulsive buying, attractiveness of the goods or momentary motivations shorten buying stages and immediately lead to the final act of buying. Therefore, pre-buying behaviors in impulsive buying cover a wider range [20].

As information collection and assessment of the options have not occurred in impulsive buying, there is a higher probability of dissatisfaction with the purchase. Empirical results show that buyers have reported lower post-buying satisfaction in the process of impulsive buying [19].

Also, it is reported that there is a higher probability for the goods to be returned in impulsive buying, as compared with normal buying [8].

**Research Background.** Although many studies have been carried out nationwide and abroad on the consumers’ behavior, there are few studies done on impulsive buying. In one of the few studies done nationwide titled “a model for investigating factors influencing impulsive buying behavior”, Nazari and Ghaderi Abed (2011) have introduced impulsive buying as one of the important and unidentified aspects of the consumers’ behavior. They introduce some factors leading to the impulsive buying behavior including buying alone, level of self-respect, threshold of being motivated, products type and propagation means. They don’t underestimate the effects of some factors such as gender, buying milieu, seller’s guide and individualism, in this regard. In another research, Ghaderi Abed (2012) investigated the factors influencing impulsive buying and stated that the process of impulsive buying does not follow the models prevalent in the field of buying process. He also asserted that it has some characteristics that differentiate it from other types of buying. The results of this research indicate that some demographic, geographical, psychological and marketing factors affect the process of impulsive buying. Heydarzadeh and Sedigh (2010) stated that impulsive buying plays a crucial role in the sales rate of retail units operating in virtual environments. They also state that a noticeable volume of the impulsive buying is related to virtual buying. These researchers believe that “holding credit cards”, “marketing incentives”, “direct marketing and its methods”, “variety of the goods available” and “easy access” are among the factors influencing impulsive buying in virtual environments. Karbasivar and Yarahmadi (2011) have introduced the factors of “holding credit card of enough balance”, “propagation activities such as discounts and samples” as well as “decoration and seller’s treatment” as the most important factors influencing impulsive behavior. As to the studies carried out abroad, Ghan and Jan (2011) have stated that in recent years the interest in impulsive buying has increased more than ever and in many developed countries, the investigation of the impulsive buying has been of high importance as a result of its positive role in increasing the sales of products. In this research, the role of demographic factors in improving impulsive buying behaviors was investigated. The results indicate that age has a direct and significant
relationship with impulsive buying and the younger individuals buy meaningfully more impulsively compared to, the older ones. Also, results show that income and gender have not a significant relationship with impulsive buying. In other words, there is no meaningful difference between women and men as regards the rate of impulsive buying. Neither has the economic status been capable of influencing the behavior of impulsive buyers.

Gutierrez (2004), in a research with the same topic in Philippines, showed that the classes of goods, buying frequency, brands comparison, and age have a significant relationship with impulsive buying. Jane Lu Hsu and Roxy Mo (2008), in a research, investigated the consumers’ reaction to insufficient information in the field of choosing the products. The results indicate that information search has a significant relationship with increasing the purchase intention. The more the consumers search for information, the more the probability that they will make a purchase. Therefore, transferring of information during the forming of impulsive motives can significantly influence the purchase decision. Dittmar (2005) introduces the 6 following factors as the set of factors affecting impulsive buying:
1. Low cost: the lower the costs of products, the higher the probability of impulsive buying. Therefore, consumer and nondurable goods are more probable to be bought on impulse.
2. Mass distribution and accessibility of the goods: the more accessible the goods are to the customers, the higher the probability that they will be observed and bought on impulse.
3. Propagation activities: the propagating of the products increases the motives for buying them.
4. Location and layout of the store: location and type of decoration, layout and also light effects of the store can affect the buying of the intended goods on impulse.
5. Easy storage and risk-reducing factors: if the buyer feels that by purchasing the goods, he has not incurred serious losses, the buying probability will increase.
6. Economic status and income: higher incomes and better economic status decrease the risk of impulsive buying [4].

Other researchers have classified the factors affecting impulsive buying into two categories of internal and external factors (Dawson and Kim):
7. External factors: those factors used by retailers and stores for encouraging the consumers to buy. These factors are known as factors that affect the appearance and conditions of a store. The most important external factors include the goods arrangement, store showcase and its conditions, decoration, light effects, notices and messages of the store, special conditions such as sale by auction and seller’s treatment of the customers.
8. Internal factors: these factors are actually conditions and characteristics of the buyer. These factors focus on the individual, not his surrounding environment. The most significant internal factors include income, personality, age and gender, individual’s view of the purchase, state of mind and motivation.

Silvera et al. (2008) regard some factors such as “holding credit cards”, “location and conditions of the store”, “economic factors”, “social factors”, “demographic factors” as well as “price and discounts” as the factors affecting the development and increase of impulsive buying.
3. Problem description

Model of Karbasivar et al. and Research Hypothesis. From among all classifications of the factors influencing impulsive buying, in this research, the classification presented by Karbasivar and Yarahmadi (2011) has been used. Based on that classification, factors influencing impulsive buying are proposed as follows:

A. Credit Card. The holding of credit cards has been taken into consideration by many researchers in recent years, and its positive role has been emphasized in most researches [10].

Credit cards can increase impulsive purchases for some reasons, the most important of which being (Cason and Lee):
1. Accessibility of payment sum
2. Having no worries for not having cash or enough money
3. Being favored with some discounts considered for credit cards
4. Also, it seems that making payment using credit cards overshadows the buyer’s conception of the money paid. In other words, it seems that when customers make a purchase using credit cards, they feel they have paid less money, or it is less burdensome to them.

Yet, it may seem that as a result of widespread use of credit cards in recent years, their effects have been diminished or weakened. Hence, the first hypothesis of the research is:
- First hypothesis: there is a significant relationship between holding credit cards and impulsive purchases.

B. Shopping Discounts. Shopping discount has been regarded as one of the most important factors in the process of impulsive buying. Shopping discounts and auction notices have played a crucial role in attracting individuals’ attention to stores and increasing their interest in impulsive buying [8].

Researches indicate that a noticeable part of impulsive purchases have been made under the influence of auction notices. Generally, customers have less internal control while facing goods with discount tags put on them. As a result, impulsive buying of such goods is more probable [5].

Shopping discounts make customers more satisfied with their own purchase. Such an experience of satisfaction makes them show less resistance against notices of discounts in other stores. In fact, impulsive buying in one store can reflect the customer’s previous experience of a successful purchase, that happened as a result of lower prices [10].

Also, it is emphasized that shopping discounts can change the customer’s assessment of the purchase. As a result, purchase process and decision-making are shortened and impulsive purchases are made [6].

Yet, as regards consumer goods and nondurable ones, can shopping discounts be effective? The second hypothesis is connected with this question.
Second hypothesis: there is a significant relationship between shopping discounts, auction notices, and impulsive buying.

C. Propagation Methods. Youn and Faber (2000) showed in their researches that those who most often make impulsive purchases react to propagation gifts including free gifts, product samples, free samples, etc. Mihic and Kursan have concluded that
propagation activities highly influence impulsive buying behavior. Also, previous researches show that the seller’s guide can help to encourage customers to buy [1]. Mattila and Berter also concluded that the seller’s friendly behavior trades off the negative effect of the store’s crowdedness, and will be effective in impulsive buying. Besides, propagation activities have been considered quite effective in customers’ decision of impulsive buying [3].

Yet, most of researches and announcements have been connected with staple goods and just a few of them have related to nondurable and consumer goods for which there is not much propagation activity. Consequently, the third research hypothesis is as follows:

- Third hypothesis: there is a significant relationship between propagation methods and impulsive buying.

D. Layout and Decoration of the Store. Mattila and Wirz (2010) state in their research that internal decoration, coloring, lights, odor, music, equipment and goods arrangement, and the method of exhibiting the goods are regarded as the factors of the purchase environment, and their fitness can accelerate the behavior of impulsive buying. Also Mattila and Wirz (2001) concluded that if the purchase environment is motivating and attractive, customers’ self-control will decrease and their momentary buying behavior will intensify [14].

Most of researches carried out emphasize the effective role of store showcase and arrangement of goods in the stores. Likewise, in a research, products arrangement in stores has been emphasized [15].

Some researchers believe that those goods which are more observable by customers are more probable to be bought on impulse [10]. Also, some researchers believe that those goods arranged in the first and second rows of the store attract more of the customers’ attention, and lead to impulsive buying. In addition, fitness and discipline of the arrangement of the goods or special light effects for some products can generate motivation for impulsive buying [17]. Based on these researches, the next hypothesis is presented as follows:

- Fourth hypothesis: there is a significant relationship between store layout and decoration with impulsive buying.

E. Economic Power. It seems that individuals with higher incomes and better economic status most often make impulsive and unplanned purchases. It may be resulted from the fact that people of higher incomes feel lower risks while purchasing. In other words, higher incomes can offset the role of negative information and assessment, and decrease the negative effects of the perceived risk [10].

Cha (2001), Bayley (1998), and other researchers emphasized that an individual’s economic status can increase his inclination to make purchases in all forms, namely impulsive ones. In another research it is admitted that higher incomes lead to more purchases, resulting in an increase of unplanned purchases [10].

Other various researches indicate that individuals of better economic status more frequently visit different stores, increasing the probability of being subject to impulsive buying [9].

Also, it is emphasized that most of impulsive purchases include luxury and unnecessary goods, and that the higher the individual’s income, the more he will buy
unnecessary goods [7]. The fifth research hypothesis deals with this issue, and delineates the relationship between income and impulsive purchase:
- Fifth hypothesis: there is a significant relationship between economic power and impulsive buying

4. Methodology:
This research can help producers and sellers to increase their sales through identifying factors intensifying customers’ behavior of impulsive buying. So, this is an applied research, and as to the research methodology, it is a descriptive survey in which the relationship between variables is analyzed based on variables’ goal. Statistical population of the research consists of all consumers and purchasers of nondurable and consumer goods who have made at least one impulsive purchase. As the number of the population members is not clear, we consider the statistical population as infinite. Stratified sampling is used for this research according to which the city of Tehran is divided into four regions (east, west, north and south) and samples are selected from each region randomly. The overall selected sample will represent the entire city with regard to its population distribution and economy. Samples are selected from buyers of nondurable goods such as foods, clothing, and cosmetics, as well as, sanitary and health care products. They were asked to fill up questionnaires, after giving them a full briefing. To determine the size of the sample, considering the infiniteness of the population, Cochran formula was used. Then, considering the error rate at 0.05, the number of samples is determined at 384 (individuals).

Validity and Reliability. If data collection tools are of required validity and reliability, then the data collected will be precise and accurate. In other words, validity ensures that the research measurement tool is capable of truly measuring the researcher’s intended parameters. In this research, the questionnaire has been approved by some of experts including thesis supervisors and advisors, and their intended corrections have been applied. Hence, the questionnaires used in this research are of the required validity.

Also, reliability of the measurement tool implies that the feature measured should produce results similar to the results of previous cases, if it is measured with the same tools and under similar conditions. In fact, validity of a measurement tool is established if it is repeatable, i.e., it must be applicable in various cases and get similar results.

To investigate the reliability of the questionnaire, Cronbach’s coefficient alpha was calculated (the next formula). As the questionnaire is designed in the form of a Likert-type Scale, and in fact is an attitude questionnaire, it is regarded as the best method for calculating Cronbach’s coefficient alpha.

To measure reliability, 20 copies of the sample of the finalized questionnaire were distributed among customers of some business units, and were then collected. Finally, the data collected were analyzed using SPSS software and the results are presented as follow:
Table 1. Investigating the research constituents with regard to reliability

<table>
<thead>
<tr>
<th>Corrected correlation of each item with the total</th>
<th>Cronbach's alpha in case of the omission of the item</th>
<th>Statement</th>
<th>Cronbach's alpha</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.706</td>
<td>0.711</td>
<td>I've made most of my daily purchases without prior planning.</td>
<td>0.758</td>
<td>Impulsive purchase behavior</td>
</tr>
<tr>
<td>0.497</td>
<td>0.758</td>
<td>The most important criterion in making a purchase is the availability of the goods.</td>
<td>0.499</td>
<td>Layout and decoration of the store</td>
</tr>
<tr>
<td>0.712</td>
<td>0.751</td>
<td>I don't worry about having an ample stock of products.</td>
<td>0.775</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.709</td>
<td>0.759</td>
<td>Often, I don't feel sorry for making a purchase without prior planning.</td>
<td>0.758</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.741</td>
<td>0.751</td>
<td>Generally, I don't need to make a list of the goods I intend to buy.</td>
<td>0.758</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.768</td>
<td>0.701</td>
<td></td>
<td>0.768</td>
<td>Sales discounts</td>
</tr>
<tr>
<td>0.478</td>
<td>0.763</td>
<td>Event if I don't intend to make a purchase, I look at the store's shelves.</td>
<td>0.369</td>
<td>Sales discounts</td>
</tr>
<tr>
<td>0.435</td>
<td>0.695</td>
<td>Shelves of the stores are effective in selling my desired goods.</td>
<td>0.369</td>
<td>Layout and decoration of the store</td>
</tr>
<tr>
<td>0.441</td>
<td>0.233</td>
<td>People think the arrangement of the products is crucial for attracting customers' attention.</td>
<td>0.369</td>
<td>Layout and decoration of the store</td>
</tr>
<tr>
<td>0.309</td>
<td>0.706</td>
<td>Interest laydown and discussion of a store motivate me to buy.</td>
<td>0.369</td>
<td>Layout and decoration of the store</td>
</tr>
<tr>
<td>0.505</td>
<td>0.397</td>
<td>I have for many times been influenced by the showrooms and layout of a store as I enter it.</td>
<td>0.378</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.478</td>
<td>0.748</td>
<td>Offering incentives and free products motivates me to buy more.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.569</td>
<td>0.404</td>
<td>The possibility of returning a product motivates me to buy.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.652</td>
<td>0.403</td>
<td>In case of losing a product for free, I become interested in purchasing it.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.644</td>
<td>0.777</td>
<td>It is more probable that I make an impulsive purchase from those stores whose advertisement I've already seen.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.748</td>
<td>0.775</td>
<td>Type of the logo and layout of the stores make me more probable that I make an impulsive purchase.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.677</td>
<td>0.709</td>
<td>Light effects and methods of attracting customers' attention make me become more interested in entering a store.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.688</td>
<td>0.708</td>
<td>I believe that the price is one of the most important motives in buying.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.704</td>
<td>0.802</td>
<td>I've made many times made a purchase without sending the goods and just because of the discount offered.</td>
<td>0.369</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.709</td>
<td>0.709</td>
<td>I think buying various goods at lower prices, even if not mentioned, can be a successful and pleasing.</td>
<td>0.917</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.917</td>
<td>0.747</td>
<td>In case of observing motives of auction and discount, I become inclined to enter the store and visit the goods.</td>
<td>0.909</td>
<td>Propaganda method</td>
</tr>
<tr>
<td>0.869</td>
<td>0.720</td>
<td>I always try to identify those stores that hold auctions.</td>
<td>0.649</td>
<td>Omitting method</td>
</tr>
<tr>
<td>0.469</td>
<td>0.779</td>
<td>I often prefer to keep a noticeable balance in my credit cards.</td>
<td>0.649</td>
<td>Omitting method</td>
</tr>
<tr>
<td>0.868</td>
<td>0.741</td>
<td>I think every individual must hold various credit cards.</td>
<td>0.649</td>
<td>Omitting method</td>
</tr>
<tr>
<td>0.369</td>
<td>0.703</td>
<td>I think using credit cards is a suitable way of making payments.</td>
<td>0.649</td>
<td>Omitting method</td>
</tr>
<tr>
<td>0.525</td>
<td>0.740</td>
<td>Using credit cards makes it easier for an individual to manage payment and receipts.</td>
<td>0.649</td>
<td>Omitting method</td>
</tr>
</tbody>
</table>

Values of Cronbach's coefficient Alpha are higher than 0.7 for all items, indicating the approving of reliability of all the items assessed. Also, the values of “correlation rate of each item with the total value” are indicative of correlation between each item and the main one. Values lower than 0.3 indicate that the item measures something other than the total criterion. No value lower than 0.3 is achieved for any of the items in this questionnaire. In the column “Cronbach's alpha”, in case of the omission of an item, the effect of omitting each item from one criterion has been shown. These values must be compared with the final Alpha value achieved. If they are higher than the value of the final Alpha, they can be omitted. Omission of the items from one criterion indicates that the results cannot be compared with results of another study used this criterion. Having compared these criteria, it is concluded that none of the constituents of this questionnaire is surplus and won’t be omitted.

5. Results and Discussion

We first investigate the general demographic features of the sample chosen as summarized in Table 2. The table demonstrates the importance of the sample selected:
As it can be noticed, the sample chosen has all the demographic features including gender, age, educations and income level, and also it is of a suitable distribution. To test the hypotheses, we intend to use parametric tests (such as regression and correlation). Hence, the first prerequisite is to investigate the normal distribution of the data. So, normalness of the data of the dependent variable is first investigated. To examine the normal distribution of the research variables data, Kolmogorov–Smirnov test is used. This test is used in order to examine the claim made as to the normal data distribution of a quantitative variable. If variables are normal, parametric tests are used, if not, nonparametric tests will be utilized.

The results indicate normalness of the data distribution in all cases. That’s because considering the results, the significance level of all variables is higher than 0.05. Also the value of Kolmogorov–Smirnov statistic is lower than the standard value of the table; hence, the data are distributed normally. Therefore, to test the correlation between dependent and independent variables, we use parametric tests (PearsonCorrelationCoefficient).
Examine Hypotheses. In this part, using correlation matrix (Pearson), we examine the possibility of a significant relationship between research variables. Apart from correlation level, significance level has also been determined for each relationship.

### Table 4. Pearson Correlation Matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>Credit card</th>
<th>Discount and auction</th>
<th>Propagation</th>
<th>Decoration</th>
<th>Income</th>
<th>Impulsive buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit card</td>
<td>1.00</td>
<td>0.117</td>
<td>0.244</td>
<td>0.099</td>
<td>0.086</td>
<td>0.119</td>
</tr>
<tr>
<td>Discount and auction</td>
<td>0.117</td>
<td>1.000</td>
<td>0.000</td>
<td>0.179</td>
<td>0.086</td>
<td>0.200</td>
</tr>
<tr>
<td>Propagation</td>
<td>0.244</td>
<td>0.000</td>
<td>1.000</td>
<td>0.393</td>
<td>0.040</td>
<td>0.000</td>
</tr>
<tr>
<td>Decoration</td>
<td>0.099</td>
<td>0.179</td>
<td>0.393</td>
<td>1.000</td>
<td>0.033</td>
<td>0.000</td>
</tr>
<tr>
<td>Income</td>
<td>0.086</td>
<td>0.086</td>
<td>0.040</td>
<td>0.033</td>
<td>1.000</td>
<td>0.033</td>
</tr>
<tr>
<td>Impulsive buying</td>
<td>0.119</td>
<td>0.200</td>
<td>0.000</td>
<td>0.000</td>
<td>0.033</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Table 5. Calculating determination coefficients**

<table>
<thead>
<tr>
<th>Hypothesis result</th>
<th>Determination coefficient</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>approved</td>
<td>3%</td>
<td>Credit card-impulsive buying</td>
</tr>
<tr>
<td>rejected</td>
<td>16%</td>
<td>Impulsive buying- discount and auction</td>
</tr>
<tr>
<td>approved</td>
<td>4%</td>
<td>Impulsive buying- propagation methods</td>
</tr>
<tr>
<td>approved</td>
<td>2%</td>
<td>Impulsive buying- store layout and decoration</td>
</tr>
<tr>
<td>approved</td>
<td>4%</td>
<td>Income-impulsive buying</td>
</tr>
</tbody>
</table>

Results (table 4) indicate that Pearson correlation coefficient for the first hypothesis is 0.189. Taking into account its error rate at 0.000, one can say that it is at 99% significance level. Hence, there is significant relationship between the two variables of holding “credit card” and “impulsive buying”, leading to the approving of the first hypothesis. Yet, the relationship is weak, and only 3% of the changes of impulsive buying rate can be attributed to this variable (table 5). Correlation coefficient for the second hypothesis (Table 4) is 0.404, and as regards the error rate of 0.000, one can say that it is at 99% significance level. Therefore, there is a significant relationship among the variables of discount, auction and impulsive buying, leading to the approving of the second hypothesis. This is a medium relationship and 16% of the changes of impulsive buying and can be attributed to this variable (Table 6).

As to the third hypothesis, Pearson coefficient is 0.070 and taking into account the error rate of 0.169, one can say that it is at 95% significance level. Hence, there is no significant relationship between the variables of propagation methods and impulsive buying. As to the fourth hypothesis, Pearson coefficient is 0.206 and taking into account the error rate of 0.000, one can say that it is at 99% significance level, leading to confirming of the fourth hypothesis. That is a weak relationship, and only 4% of the changes of impulsive buying can be attributed to store layout and decoration (Table 50). Also, the results (Table 4) show that the correlation coefficient for the relationship of income-impulsive buying equals 0.154, and taking
into account the error rate of 0/000, one can say that it is at %99 significance level. This relationship is a weak one, and only %2 the changes of impulsive buying can be directly attributed to this variable (Table 5).

**Multi-Variate Regression Equation.** In order to measure the effects of the set of mentioned factors on impulsive buying, it is required that a multi-variate linear equation be determined using a test. To do so, the linearity of the equation must be examined using ANOVA Test.

<p>| Table 5. Examining linearity of the multi-variate equation |
|---------------------------------|---------|---------|----------|</p>
<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>regressions</td>
<td>51/771</td>
<td>5</td>
<td>10/354</td>
<td>21/426</td>
</tr>
<tr>
<td>remainders</td>
<td>181/702</td>
<td>376</td>
<td>.483</td>
<td></td>
</tr>
<tr>
<td><strong>sum</strong></td>
<td>233/473</td>
<td>381</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The value of $F= 21/426$ with the significance level of $\text{Sig} = .000$ is quite significant and the linearity of the regression is established. For the next stage, it is necessary to test whether coefficients of this model are significant or not. For this purpose, we use table 6 for calculating coefficients and statistic $T$.

| Table 6. Calculating coefficients and statistic $T$ |
|---------------------------------|---------|---------|----------|---------|
| **Model** | **nonstandardized Coefficients** | **Standardized Coefficients** | **t** | **Sig.** |
| | **B** | **Std. Error** | **Beta** | |
| Fixed coefficient 1 | income | .1281 | .549 | 2.819 | .005 |
| | Credit card | .191 | .046 | .129 | 2.787 | .006 |
| | Discount and auction | .389 | .049 | .141 | 3.001 | .003 |
| | propagation | -.022 | .050 | -.021 | -.442 | .659 |
| | decoration | .137 | .054 | .119 | 2.539 | .012 |

Results of table 6 indicate that the values of $t$ and $\text{Sig.}$ are not significant for the variable of propagation because the value of the error is over 0/05. Hence, this variable is omitted from the linear regression. Table 7 shows the calculation of regression coefficients without taking into account the mentioned coefficient.

| Table 7. Recalculation of regression coefficients of research variables |
|---------------------------------|---------|---------|----------|---------|
| **Model** | **Non-standardized Coefficients** | **Standardized Coefficients** | **t** | **Sig.** |
| | **B** | **Std. Error** | **Beta** | |
| Fixed coefficient 1 | income | 1.227 | .327 | 3.755 | .000 |
| | Credit card | .134 | .045 | .130 | 2.819 | .005 |
| | Discount and auction | .387 | .048 | .137 | 2.983 | .003 |
| | propagation | .136 | .054 | .118 | 2.525 | .012 |

Results indicate that the coefficients calculated are at %95 significance level as their significance level is lower than 0/05 and the value of the statistic $t$ is higher than that of the table. In the next stage, the normalness of the remainders is assessed. As is noticed, fixed coefficients equaled 1/227 and regression coefficients
for income, credit card, discount and decoration were 0.064, 0.134, 0.387 and 0.136 respectively. As a result, regression equation is as follows:

\[ E(y / \chi, \beta, \epsilon, \mu) = 1/227 + 0.064 \chi + 0.134 \beta + 0.387 \epsilon + 0.136\mu \]

This equation indicates that the variables of discount, holding credit card and income have, respectively, the highest effects on impulsive buying.

6. Conclusion and Future Works

**Discounts and Auction Notices - Impulsive Buying.** The results indicate that there is a significant relationship between discounts and auction notices, and purchases without prior decision. It was already expected that some of customers’ behavior as regards impulsive buying would depend on auction notices and discounts. The offering of discounts is regarded as a kind of motivation for purchasing even those goods for which the customers feel no need. Also auctions in which substantial discounts are offered for goods can be regarded as strong motivators for attracting customers’ attention and making them buy. Some reasons for this case are as follow:

1. Making purchases at lower prices is important for many customers, and can be considered as a strong motivation for justifying the buying of various types of goods.
2. Lower prices can reduce the perceived risk of buying. Hence, customers are more satisfied, in this case.
3. Price is one of the key factors for customers in assessing the value of the intended goods. Hence, lower prices improve the customers’ assessment. Therefore, stores should pay attention to the fact that discount notices and auctions are crucial for improving customers’ motivation in buying on-impulse and consequently increasing sales. Hence, it is suggested that you:
   1. Regard some special time intervals as auction periods.
   2. Hold auctions in a way that customers and people of the region be well informed about it.
   3. Inform special customers of the auctions using SMS.
   4. Give loyal customers generous discounts.
   5. Define various reasons for offering discounts.

**Layout and Decoration – Impulsive Buying.** Two of the factors that highly influence customers’ momentary buying behavior are store layout and decoration. Results achieved indicate that customers get interested in some products upon observing decoration and arrangement of the goods. This is regarded as a strong motivation for making purchases. As regards this case, some reasons are stated as follow:

- Store showcases attract the attention of pedestrians and customers, making them find the goods desirable.
- The method of goods arrangement influences customers’ conception of beauty and aesthetics.
- Conditions of decoration and products arrangement make the products seem better than normal. Hence, they can generate motivation for impulsive buying.

Hence, considering the effects of goods arrangement and decoration on impulsive buying, it is proposed that stores pay more attention to the following issues:
- Building showcases, and making decoration using up-to-date methods commensurate with the type of the goods to be sold
- laying out the goods carefully and in a disciplined manner
- refraining from disorderly arrangement and decoration
- exposing goods and commodities in showcases

**Credit Card – Impulsive Buying.** The results indicate that there is no significant difference between the group that held credit cards and the group that didn’t as regards their impulsive buying rate. Maybe, that’s because not having sufficient money can be regarded as an obstacle to impulsive buying. When a person observes some goods and the buying motivation is generated inside him, and yet he doesn’t have enough money, the motivation doesn’t lead to a purchase behavior. But when the same person holds credit cards, this problem is solved and the motivation is turned into a behavior. Also, making the payment using credit cards seems to cause less worry for the purchaser. In other words, making cash payment, as opposed to payment by credit card, has a lower perceived risk. Hence, the customers show less resistance to making payment using credit cards.

In general, the results of this hypothesis show that various sellers and stores should pay more attention to the significance of credit cards, and adopt some measures including the following ones:
1. All stores must be supplied with sound and tested POS systems.
2. The higher the number of such systems and related banks is, the better the services will be.
3. As far as possible, some discounts must be offered for making payments through POS systems.
4. Security of POS systems must be provided, as far as possible, so that the customers enter the codes or the intended sums.

**Income Impulsive Buying.** One of the other factors crucial for generating motivation for impulsive buying is an individual’s income and economic power. This could result from the fact that higher incomes reduce the perceived risk of purchase and customers will be less sensitive to the purchase process. Also, higher incomes are usually accompanied by higher purchase rates and consequently the possible purchase rate goes higher. Research results emphasize the significance of individual’s incomes. Therefore, stores must take into account the significant correlation between the individuals’ income level and impulsive buying rate. In general, it is recommended that:
- Those stores located in high-income areas should have more integrated plans for increasing impulsive buying behavior and invest more on it.
- Building showcases and paying attention to decoration in stores located in high-income areas should be more.
References