

# Detecting the In-Store Stimulating Factors That Generate Egyptian Consumers' Impulsive Buying Desire in Large Retail Stores

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## Abstract

Impulse buying is a common phenomenon among all consumers; it is getting great attention from researchers, economists as well as marketers. Globally, more than half of large mall shoppers were found to purchase on impulse, indicating the impulse buying is a critical issue that should be studied and find out its causes and motives. This study aims to 1) identify the in-store stimulating factors that influence Egyptian consumers' impulsive buying desire in large retail stores and the relative importance for each one and 2) develop a mathematical model to predict the ability of large Egyptian retail stores to generate an immediate desire for the consumer to make an impulse purchase. In this regard, this study proposes five in-store stimulating factors that may influence impulse buying for Egyptian consumers in retail stores which are: store environment, store layout, shelf design, sales promotion, and salespersons effectiveness. The researcher used the quantitative approach to collect data from a sample of 400 respondents from customers of the largest retail stores in Alexandria city. To reach our results, correlation analysis and linear regression were used. The importance of this research lies in the fact that it provides a comprehensive explanation of the impact of in-store stimulating factors on impulsive buying for Egyptian consumers and hence, the results of this research will provide marketing and management experts with useful insights that help them to design the appropriate marketing strategies to increase their sales. Results indicated that there is a significant and positive relationship between all proposed stimulating factors and generating impulse buying desire. Furthermore, the study revealed that the sales promotion factor is the most influential in Impulsive buying process for Egyptian consumers and shelf design is the lowest.

## Keywords

Impulse Buying Inclination, In-Store Stimuli, Egypt, Retail Stores,

## 1. Introduction

There is no doubt that impulse buying behavior and the importance of studying it will remain one of the pillars of academic research for a long period of time. This interest is due to its economic importance especially in the retail business world (Verplanken & Sato, 2011). Earlier researches show that impulsive buying share is about 50% - 70% of the total retail store sales (Dawson & Kim, 2010). In the same context, Ruvio & Belk (2013) revealed that 62% of the total sales in the retail world are the consequence of Impulse buying. Moreover, Wu et al. (2016) reported that approximately 80% of retail sales by customers are impulsive.

Retailing industry has emerged as one of the fastest growing and widespread industries in Egypt. Therefore, it has become necessary for managers of Egyptian retail stores to understand the buying pattern of consumers. Impulsive buying pattern is one of the important patterns that should be studied as its economic importance is steadily increasing day by day due to its ability to increase the profits of any store if its motives are well understood (Verplanken & Sato, 2011). Akyuz (2018) defined impulse buying as it is unscheduled purchase that made spontaneously; it is immediate decision and the individual acts without thinking about the consequences of such a purchase. In the same context, Badgaiyan & Verma (2015) defined impulse buying as it is something that is usually bought unplanned. They added when a person goes shopping, different factors affect the mental level that compels him to buy in this way. Kacen and Lee (2002) demonstrated several factors that affect the impulse behavior as consumers' moods, gender, age, and consumers' culture. Koski (2004) stated that impulse purchasing is effected by several factors such as easy accessibility of store, wider range of displayed goods, and promotional activities. According to Al-Salamin & Al-Hassan (2016), there are other factors like the internal and external environment of stores, sale, and discounts also affect impulse buying behavior. Piron (1991) mentioned that consumers often purchase spontaneously after being exposed to stimulating cues like price promotion and attractive product appearance.

With the huge expansion of retailing industry in Egypt, many retailers are struggling to ensure survival in the market. So, they must adopt strategies to increase their sales and profits. One of such strategies is to promote impulse buying among consumers due to its great economic importance to the retailer. By reviewing existing literature, we found out there is a lack of knowledge about the behavior of Egyptian consumers regarding impulse buying and the factors that influence this behavior. In addition, we found out most previous researches focused on personal traits, cultural, social, psychological, and behavioral factors as causes of impulsive buying, while in-store stimuli have not been adequately stu-

died. Therefore, it is interesting to fill this gap in literature and stand of these factors for Egyptian consumers. In this regard, this study proposes a conceptual framework serves a comprehensive insight on in-store stimulating factors that influence impulse buying for Egyptian consumers. Actually, this study will contribute in enhancing the knowledge of retailers about the factors that motivate Egyptian consumers to impulsive buying and accordingly they can follow the appropriate marketing strategies to sell more products and achieve more profits.

The remainder of this paper is organized as follows. In the second section, the concept of impulse buying will be discussed. The third section will be devoted to the presentation of the literature review and formulating hypotheses, followed by depicting the conceptual model framework of the study. In the fourth section, the research methodology will be introduced. In section five, the adopted analytical approaches will be highlighted. In section six, the findings of the research will be discussed. In section seven, conclusion and strategic implications will be introduced. Finally, in section eight and nine, the recommendations and future studies will be presented respectively.

## 2. Concept of Impulse Buying

Impulse buying is a major research issue among the masses of researchers interested in this field due to its widespread prevalence across a wide range of product categories (Vohs & Faber, 2007). Impulsive buying occurs when consumers do not have any intention to purchase a specific product or brand. Hence, the Impulsive buying behavior is an instantaneous decision made buyer without previous planning or deliberation about purchasing a product (Hadjali et al., 2012).

Various definitions have been given to impulse buying. Beatty and Ferrell (1998) defined impulse buying as it is urgent buying without any prior-shopping objective which is often accompanied by feelings of excitement, pleasure and a powerful urge to buy. According to Sharma et al. (2010), impulse buying is a sudden and immediate purchase with no purchasing pre-intentions. Verhagen and Dolen (2011) pointed out that impulse purchase happens once consumers have an urge to purchase a particular product without considering the consequences of and reasons for the purchase. In the same context, Badgaiyan et al. (2016) defined impulse buying as an unplanned buying where consumers tend to purchase items that they did not plan to buy. Wu et al. (2016) illustrated the impulse buying as a sudden and unplanned purchase decision that is stimulated when consumers are exposed to certain stimulating cues in the store environment.

Generally, impulse buying can be defined as a buying behavior where consumer buys something without thoughtful consideration or planning. It's characterized by a sudden strong urge to make a purchase, usually in response to a positive emotional state such as excitement or happiness. Researches developed by Aragoncillo and Orús (2018) reveal that 40% of consumers spend more money than planned due to Impulse buying. Park and Lennon (2006) stated that more

than \$4 billion in annual sales in the United States occurred through impulsive buying. This indicates that impulse buying is common phenomenon and critical to a retailers' profit. For this reason, marketers and researcher tend to increase their understanding and knowledge on influential factors that affect impulse buying behavior.

### 3. Literature Review and Formulating Hypotheses

Previously, consumer purchasing behavior could be described as traditional, where the consumer prepares a list to purchase the desired products then he goes to the store to purchase these products. However, in the recent years, consumer behavior has changed with regard to the method of purchasing. We find him go to the store and suddenly buying many items that he has not planned to buy before. Researchers have known this behavior as impulsive buying and indicated this behavior is stimulated when consumers are exposed to certain stimulating signals in the store.

#### 3.1. In-Store Stimulating Factors and Impulse Buying

Managers of retail stores spend significant time and effort in designing an attractive store environment by giving more attention to in-store stimulating factors (Berry et al., 2002). Youn and Faber (2000) explained in-store stimuli as marketing signals used by marketers to attract consumers to make purchases. These stimuli may include in-store sales promotion, internal advertising, enhancing physical environment of the store, etc. Chamorro (2015) revealed that about 62% of in-store purchases are made impulsively. Thus, this pattern of purchasing can be increased by paying attention to different in-store stimuli.

In-store stimulating factors not only attract new buyers but also encourage existing in-store buyers to purchase additional products (Dawson & Kim, 2010). In-store stimuli are powerful tools to motivate the buyer to stay longer in the store and, on the other hand, help him increase the goods purchased. These triggers can influence customers' emotions, attention, memory, and purchase decisions. However, not all stimuli are equally effective. This study proposes five in-store stimuli which are store environment, store layout, shelf design, sales promotions, and salespersons effectiveness.

#### 3.2. Store Environment

Berman & Evans (2007) defined store environment as the physical characteristics of the store or shopping mall that create a certain impression from the consumer's view such as lighting, music, cleanliness, merchandise display, fixtures, floor coverings, colors, odors, temperature, decoration, etc. Porral & Mangin (2019) argue that the attributes of the store can make consumers stay longer in the store, thus encouraging them to make more purchasing. In the same context, Sherman et al. (1997) pointed to store environment that it may influence the number of items purchased, time and money spent. The same meaning is con-

firmed by [Donovan et al. \(1994\)](#), where they show that store atmosphere drove pleasure, time and money spent.

[Hussain & Siddiqui \(2019\)](#) pointed to the importance of store atmosphere and stated it should be considered by retail marketers because a good store atmosphere will make consumers feel comfortable which can increase the potential of consumers to shop more. On the other hand, [Kurniawan \(2013\)](#) shows that store atmosphere has a positive and significant influence on impulse buying; the better the store atmosphere, the higher the impulse buying. In addition, [Akram et al. \(2016\)](#) investigated the relationship between the environment of the store and the actions of impulse purchasing. The findings showed that the environment of the shop has a significant effect on impulse buying behavior.

It is clear that the store environment is a major factor that influences consumers' impulsive buying behavior. Therefore, retailers must provide environmental variables that enhance consumers' buying spirit and try to have a positive impact on consumers' purchasing behavior, especially impulsive buying behavior.

Based on the above discussion, the researcher posits hypothesis H1: there is a significant relationship between store environment and generating impulsive buying desire for Egyptian consumers.

### 3.3. Store Layout

Store layout refers to the way in which products, shopping carts, and aisles are arranged, and the spatial relationships among these items. [Kotler \(2001\)](#) defined the concept of store layout as it is an initiative to design a good store environment to boost the buying opportunity, so that customers can quickly find the product they want. According to [Ünsalan \(2016\)](#), store planning includes layout of the space allocated for displaying products and its ratio to the total area, products placement area, as well as layout the space allocated to the entrance area.

Store layout is important since they help present product assortments in an effective and positive way ([Aghazadeh, 2005](#)). [Spies et al. \(1997\)](#) stated that a good layout produce and enhance positive affect toward the store by helping the shoppers to find what they want easily and makes consumers spend longer shopping in the store. On contrast, a poor layout causes negative affect on consumer and consequently on purchasing volume. [Baker et al. \(2002\)](#) added a good layout also makes the shopping more enjoyable, by reducing the stress in shopping.

[Sherman et al. \(1997\)](#) confirmed that a good store layout makes the shopper to buy additionally. In a study by [Heilman et al. \(2002\)](#), they concluded that the better the layout of the store, the more time a customer spends inside the store, and consequently the greater the chance of impulsive purchasing. This study was supported by a research conducted by [Santini et al. \(2019\)](#) where the research results have figured out that the longer time a person stays at the store, the greater the probability of impulse buying. This relationship occurs because customers who remain more time in a store are more likely to be influenced by the

stimulus factors provided by this store environment.

Based on the above discussion, the researcher posits hypothesis H2: there is a significant relationship between store layout and generating impulsive buying desire for Egyptian consumers.

### 3.4. Shelf Design

Store shelves are very important tool for any retail store, they are not only helps to organize things precisely, but they are also a good display device for the merchandise. In addition, good shelf design helps customers to make up their mind about whether they will buy the product or not. Drèze et al. (1995) concluded in their research that a retailer can increase sales by better managing the shelf space. Anic and Radas (2006) mentioned in their study that the good shelf design led consumers to spend more time in stores and hence higher purchasing. Fancher (1991) argue that a well-organized shelf can contribute in increasing overall consumer satisfaction during shopping, which is positively related to sales volume of the store and motivate the consumer to prefer this store over others.

In one study by Mogilner et al. (2008), they pointed out that the number of categories that retailers provide on the shelves has a positive effect on sales volume. In the same context, Hwang et al. (2005) added the structured shelf design has a significant positive effect on sales volume. Nierop et al. (2008) stated that placing the product at eye level is the most effective method of placing products on the shelf and accordingly, the retail store's sales are likely to increase. On contrast, unorganized shelves may lead to a negative impact on customer comfort, and then this can lead to a lack of sales (Jones, 1999). Generally, shelf design can be regarded as an assistant factor that helps the retailer to create a visually appealing and pleasing shopping environment that will in turn leads to increasing the sales. Han et al. (1991) found that the greater the store stimuli such as visual merchandising, the more likely a consumer will make an impulse purchase.

Accordingly, the researcher posits hypothesis H3: there is a significant relationship between shelf design and generating impulsive buying desire for Egyptian consumers.

### 3.5. Sales Promotion

With increasing market competition, sales promotion has become one of the most powerful tools for marketers to motivate buyers to increase their purchases (Khan et al., 1999). According to Kotler et al. (2013), promotion is core component of marketing activity; it is motivational action for a short period of time designed to stimulate faster purchase of certain products. Lehmann and Winer (2000) further pointed out the promotion as "special offers" that are essentially aimed at stimulating product purchasing. According to Akram et al. (2018), the goal of product promotion is to achieve real and immediate impacts on the purchasing habits of customers. Zhou and Gu (2015) argue that the price-based

promotions have been increased in the last years because of its ability to stimulate the sales and has a significant impact on impulse purchasing. [Peck and Childers \(2006\)](#) stated that in-store promotions have a positive impact on impulse purchasing. [Pawar et al. \(2016\)](#) emphasized the same meaning and pointed out that promotions encourage shoppers to increase impulse buying.

[Badgaiyan and Verma \(2015\)](#) indicated that sales promotion significantly affected impulsive buying behavior. In addition, [Atulkar and Kesari \(2018\)](#) concluded that there is a significant and positive relationship between promotion activities by retailers and impulse buying tendency. Also, time-limited offers or those accompanied by a countdown intensify the impulse buying. This result was supported by a study conducted by [Agrawal & Sareen \(2016\)](#), it shows the limited-time offers has helped retailers to attract consumer's attention and consequently increased the impulse buying. [Youn and Faber \(2000\)](#), in their research showed that people are buying more impulsively when there are promotional gifts such as free gifts, discounts, free samples, etc. [Zhou and Wong \(2003\)](#) argue that consumers tend to be more impulsive when there are sales or product discounts.

[Syastra and Wangdra \(2018\)](#) declared among the factors that help in impulsive buying are the sales promotions and discounts. [Muruganatham and Bhakat \(2013\)](#) explained the promotion is one of the factors that affect impulsive buying. [Solenski and Heriyanto \(2017\)](#) concluded that promotion has a positive and significant effect on impulsive buying decisions. According to [Leba \(2015\)](#), stores that have effective sales promotion programs will find it easier to achieve impulse buying than those stores that do not have promotion programs. Based on the above discussion, the researcher posits hypothesis H4: there is a significant relationship between sales promotion and generating impulsive buying desire for Egyptian consumers.

### **3.6. Salespersons Effectiveness**

Salespersons are often considered the most influence factors of the customers ([Crosby et al., 1990](#)). [Yoo et al. \(1998\)](#) stated that in the retail store, impact is induced by the salesperson where a salesperson's actions and behaviors can influence customers satisfaction and consequently affect the amount of purchases they make. This result was confirmed by a research conducted by [Atulkar & Kesari \(2018\)](#); they concluded that the educated and trained salesperson who provide the right information, quickly responding to the questions and complaints of the consumers can encourage the consumers to make impulse buying. In the same context, [Peck and Childers \(2006\)](#) pointed out that good salespersons interaction with customers would increase impulsive selling. In addition, store employees' friendliness has positive effects on customers' buying behavior. [Mattila and Wirtz \(2008\)](#) stated the perceived friendliness of store employees may lead to sales increasing.

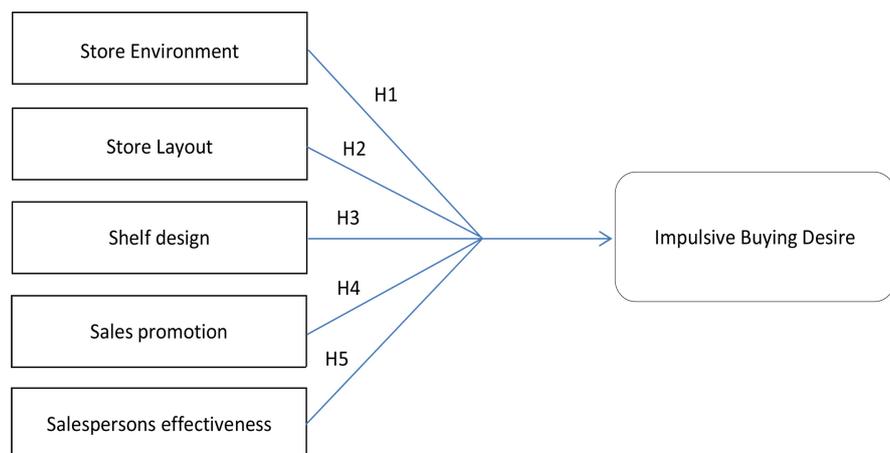
[Yu and Bastin \(2010\)](#) argue the hospitality and assistance that are provided by

store employees can provide positive emotions to consumers which subsequently influence the impulsive buying behavior. A research carried out by [Azim \(2013\)](#) indicates that it is essential for salesperson to maintain a dynamic and welcoming environment within the store in order to stimulate customers for impulsive purchase. In addition, [Han et al. \(1991\)](#) pointed out that the interaction between salesperson and customers could lead to impulse purchase. Moreover, [Hoch and Loewenstein \(1991\)](#) argue that the buyer could accept a sudden or unexpected buying idea because of the interaction with a salesperson. Therefore, this research proposes hypothesis H5: there is a significant relationship between salesperson effectiveness and generating impulsive buying desire for Egyptian consumers.

### 3.7. Impulse Buying Desire

Impulse buying desire has been defined as the degree to which an individual is likely to make unintended and immediate purchases ([Beatty & Ferrell, 1998](#); [Rook & Fisher, 1995](#)). [Weun et al. \(1998\)](#) pointed out impulse buying desire as the tendency to make unplanned purchases and to buy spontaneously with no consideration of the consequences. [Gerbing et al. \(1987\)](#) referred to impulse buying desire as a tendency to respond quickly to given stimulus without evaluation of consequences. [Donovan et al. \(1994\)](#) found that a pleasant purchasing environment led shoppers to spend more time in the store and consequently increased the consumer tendency to unplanned shopping and impulse purchasing.

Previous researches show that consumers continuously suffer from the desire to buy impulsively during their shopping trips and they are unable to resist this desire despite their best efforts to control or regulate it ([Rook, 1987](#); [Dholakia, 2000](#); [Baumeister, 2002](#)). Based on previous discussion, the suggested research model about the in-store stimulating factors that generate Egyptian consumers' impulse buying desire in large retail stores can be illustrated as follows.



The Suggested Research Model

Source: compiled by author

## 4. Research Methodology

The study uses primary data collected from a random sample of large retail stores customers in Alexandria; Carrefour, Metro, Zahran, Fathallah, Kheir Zaman, Kazyon, and Beet Elgomla. A questionnaire is used as the main tool to collect these primary data to measure the variables of interest. The respondents were asked to show to what extent they believe the written sentence corresponds to them and leads to impulsive buying. This was implemented by using a five point Likert scale ranging from 1 indicating strongly disagree to 5 indicating strongly agree.

All the scales used in this research to collect the data were drawn from previous studies and adapted to meet the purpose of our research. Specifically, store environment scale was adapted from [Mohan et al. \(2013\)](#); store layout and salespersons effectiveness scales were adapted from [Dickson and Albaum \(1977\)](#); while sales promotion scale was adapted from [Kchaou and Amara \(2014\)](#).

The first stage of this study involved a pilot test that was conducted on 30 questionnaires to refine the data gathering instrument. According to [Malhotra \(2004\)](#), pilot test is a formal validation of the questionnaire using small number of sample. In addition, it helps researchers to make alterations to minimize any unanticipated issues and is normally performed to test the viability of this research before implementation of a full-scale survey ([Zikmund, 2003](#)). Also, this stage involved ensuring both the validity and the reliability for the instrument after the required adaptation. [Kumar \(2005\)](#) and [Zikmund \(2003\)](#) assert if the data collection tool is well-structured, valid, reliable, and founded on a suitable literature review and statistical assumptions then the finding can be generalized to the bigger population.

### 4.1. Ensuring the Validity

[Babbie \(2004\)](#) defines validity as the extent to which the measure accurately reflects the concept it is intended to measure. [Carmines and Zeller \(1979\)](#) argue the validity is the extent to which the instrument accurately measures what it is supposed to measure. These definitions refer to two points. First the instrument should actually measures the concept in question and the concept should be measured accurately. In this regard, the content validity has been applied in this research to ensure the instrument is appropriate as well as the sentences are generally understood. For further confirmation of instrument validity, the researcher applied factor validity analysis using SPSS software. The results of factor analysis are illustrated in [Table 1](#).

According to the output of factor analysis, it is clear the questionnaire is characterized by factor validity; the sentences included in the questionnaire actually express the variables that are required to be measured and consequently the instrument is fully representative of what it aims to measure and the statements are generally understandable.

**Table 1.** Component matrix.

Factor	Store_Environment					Store_Layout					Shelf_design					Sales_promotion					Salespersons_effectiveness				
Statement	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13	S 14	S 15	S 16	S 17	S 18	S 19	S 20					
Component	0.761	0.847	0.694	0.756	0.684	0.745	0.736	0.819	0.657	0.733	0.641	0.692	0.753	0.831	0.783	0.819	0.782	0.627	0.673	0.764					

Extraction Method: Principal Component Analysis. Source: Primary collected data.

## 4.2. Ensuring the Reliability

After testing the validity of the instrument, the construct reliability test is then carried out to ensure the internal consistency of the instrument. According to Miller (2005), the questionnaire is considered reliable when the same or similar scores are obtained in repeated testing with the same group of respondents. In this research, Cronbach's alpha coefficient is used to ensure the reliability of the questionnaire. The closer the Cronbach's alpha coefficient is to 1, the greater the internal consistency of the items of the scale (Gliem & Gliem, 2003). According to Guari and Gronhaug (2005), Cronbach's coefficient of less than 0.6 is considered poor, those greater than 0.6 but less than 0.8 are considered acceptable, and coefficient greater than 0.8 are considered good.

As shown in Table 2, this study's questionnaire had a Cronbach's alpha coefficient of 0.863 which means this instrument is highly reliable; its items have relatively high internal consistency and consequently can be used for further analysis. Based on the obtained results of validity and reliability, the instrument has been finalized.

## 4.3. Research Sample Size

Sekaran (2003) defines sampling as the process of selecting a sufficient number of elements from the population so that by studying the sample, and understanding the properties of this sample, it would be possible to generalize the properties to the population elements. Fink (1995), referred to the sample size as it is the number of units that needed to be surveyed to get precise and reliable findings that represent the population as a whole. Hence, it is essential that the sample size be determined in an appropriate and systematic manner that conforms to certain acceptable standards. According to Cochran (1963), an adequate sample size required for this study is 384 respondents as computed below.

$$n = \frac{Z^2 pq}{e^2} = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2} = 384$$

where  $n$  is the sample size;

$Z$  is the corresponding value of the desired confidence level in  $Z$  value table, e.g. if the desired confidence level is 95%. So,  $Z = 1.96$ ;

$p$  is the estimated proportion of an attribute that is present in the population;

$q$  is  $1-p$ ;

and  $e$  is the desired level of precision.

**Table 2.** Reliability test.

Cronbach's alpha coefficient	N of items
0.863	20

Source: Primary collected data.

This sample size is based on the assumptions that the confidence level is 95% with standard deviation of 0.5 and a confidence interval of  $\pm 5\%$ . This sample size was also supported by [Krejcie & Morgan \(1970\)](#). For more accuracy, a sample of 400 has been taken. The usable observations were 369 respondents with response ratio 92.25%. Also, the researcher applied Kaiser-Meyer-Olkin (KMO) analysis to stand on the adequacy of the sample size for analysis. Result of KMO analysis as shown in [Table 3](#) = 0.811 which means the suitability of the sample size.

#### 4.4. Ensuring the Normality of Collected Data

The importance of normality lies in the fact that many statistical techniques require the data under test to be normally distributed. In addition, Statisticians usually test the data for normality in order to decide whether to use parametric or non-parametric statistical procedures in their analysis.

[Hair et al. \(1998\)](#) stated the normally distribution test is vital for equation modeling and violating this assumption may lead to false rejection of the candidate model. [Tabachnick & Fidell \(2007\)](#) argue if the ultimate aim of the research is to make inference, then testing for normality is an imperative step in analysis. The researcher used a common test to ensure the normality of data which is Kolmogorov-Smirnov test. The results of this test as shown in [Table 4](#) indicate the collected data are normally distributed.

### 5. Analytical Approach Adopted

In the following sections, correlation analysis to discover the strength and direction of relationship between all independent variables and dependent variable will be used. Also, regression analysis will be conducted to detect the most important in-store variables that strongly influence in generating impulsive buying desire for Egyptian consumers, then using these variables in building a model to predict the ability of retail store to generate this desire among its consumers. All these statistical analysis will be performed using the SPSS for Windows.

#### 5.1. Correlation Analysis

Correlation analysis is used to understand the nature, direction and strength of relationships between two individual variables. If there is correlation between two variables it means that with change in one variable, the other variable also changes. In this research correlation analysis is used to discover the strength and direction of relationship between the dependent variable (impulsive buying

**Table 3.** KMO and Bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.811
Bartlett's Test of Sphericity	Approx. Chi-Square	938.762
	Sig.	0.000

Source: Primary collected data.

**Table 4.** Normality tests.

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Store Environment	0.176	369	0.192
Store Layout	0.213	369	0.061
Shelf Design	0.196	369	0.103
Sales Promotion	0.137	369	0.213
Salespersons Effectiveness	0.189	369	0.144

One-Sample Kolmogorov-Smirnov Test. Source: Primary collected data.

desire) and each one of the suggested factors (independent variables). The results of correlation analysis are depicted in **Table 5**.

The results above indicate there is a positive correlation between all suggested factors (the independent variables) and generating impulsive buying desire for Egyptian consumers (the dependent variable). Sales promotion is the highest factor affecting in generating impulsive buying desire for Egyptian consumers; its correlation coefficient is 0.803 followed by store environment 0.736, then store layout 0.718, while the least influential factor is shelf design with correlation coefficient 0.563.

## 5.2. Regression Analysis

Before conducting the regression analysis, it must be confirmed that there is no significant correlation between the independent variables with each other to avoid which is called multicollinearity problem. Multicollinearity occurs when the multiple linear regression model includes several variables that are significantly correlated to each other. This can create challenges in the regression analysis because it becomes difficult to determine the individual effects of each independent variable on the dependent variable accurately (Hair et al., 2006). Multicollinearity can lead to unstable and unreliable coefficient estimates, making it harder to interpret the results and draw meaningful conclusions from the model, which means the model with multicollinearity may not be trustworthy (Frank, 2001; Hosmer et al., 2013). So, the researcher tries first to discover if there is a multicollinearity problem among the independent variables before proceeding with the multiple regression analysis. For this purpose, the researcher will apply Variance Inflation Factor analysis (VIF) which measures the

**Table 5.** Results of correlation analysis (*r*).

		Impulsive Buying Desire	Store Environment	Store Layout	Shelf Design	Sales Promotion	Salespersons Effectiveness
Impulsive Buying Desire	Pearson Correlation	1					
Store Environment	Pearson Correlation	0.736**	1				
Store Layout	Pearson Correlation	0.718**	0.471**	1			
Shelf Design	Pearson Correlation	0.563**	0.551**	0.465**	1		
Sales Promotion	Pearson Correlation	0.803**	0.426**	0.384**	0.560**	1	
Salespersons Effectiveness	Pearson Correlation	0.647**	0.347**	0.372**	0.393**	0.420**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

strength of correlation between the independent variables with each other in the regression model. The results of multicollinearity test are shown in **Table 6**.

Result showed that  $VIF < 5$  and  $Tolerance > 0.1$ , which indicates multicollinearity will not be a problem in the regression model; the variables in the model are not correlated and consequently the model is reliable for prediction.

### Multiple Linear Regression Analysis

Regression analysis is a reliable method of identifying which variables have impact on the dependent variable, it confidently identifies which factors are most important and those that can be ignored. In addition, it examines whether independent variables do a good job in predicting an outcome of the dependent variable or not. Therefore, to find out which factors have the greatest influence in generating Egyptian consumers' impulsive buying desire in large retail stores, the multiple regression analysis is conducted. The results of this analysis are illustrated in **Tables 7-9** respectively.

- R-square is a goodness-of-fit measure for linear regression models. This measure indicates the percentage of the variance in the dependent variable that the independent variables explain collectively. In addition, it measures the strength of the relationship between the independent variables and the dependent variable.
- In our study, R-Square has value of 0.776 which explain that 77.6% of Egyptian consumers' impulsive buying desire (the dependent variable) is generated due to the proposed independent variables, while 22.4% of the impulsive

**Table 6.** Multicollinearity test.

Model	Collinearity Statistics	
	Tolerance	VIF
Store environment	0.597	1.104
Store layout	0.328	1.297
Shelf design	0.647	1.065
Sales promotion	0.196	1.392
Salespersons effectiveness	0.417	1.285

Dependent variable: impulsive buying inclination.

**Table 7.** Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.881	0.776	0.773	0.321	1.694

Predictors: (Constant), Salespersons effectiveness, Store environment, Shelf design, Sales promotion, Store layout. Dependent Variable: Impulsive Buying Desire.

**Table 8.** ANOVA.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	172.242	5	34.448	251.200	0.000
Residual	49.780	363	0.137		
Total	222.022	368			

Predictors: (Constant), Salespersons effectiveness, Store environment, Shelf design, Sales promotion, Store layout. Dependent Variable: Impulsive Buying Desire.

**Table 9.** Results of multiple linear regression analysis.

Model	Standardized Coefficients Beta	Sig
Constant (-0.273)		0.005
Store environment	0.321	0.000
Store layout	0.258	0.000
Shelf design	0.168	0.000
Sales promotion	0.347	0.000
Salespersons effectiveness	0.227	0.000

Dependent variable: Impulsive buying desire.

buying reasons are affected by other factors. In other words, all the independent variables of this study have influence of 77.6% on the dependent variable (Impulsive Buying desire). i.e. 77.6% of the total variation in Egyptian

consumers' impulsive buying inclination has been explained by the independent variables.

- Durbin-Watson value is 1.694 which indicates that the variables in the model are not auto correlated and consequently, the model is reliable for prediction.
- ANOVA analysis results indicate that the independent variables have a significant effect on dependent variable. This means that the independent variables can explain the variation in Egyptian consumers' impulsive buying desire. Generally, ANOVA outcomes indicate that the model as a whole is statistically significant.
- The influence of each independent variable on the dependent variable can be explored by looking at the standardized beta coefficient. The bigger value of beta coefficient, the stronger the predictability of the dependent variable. The standardized coefficients for our proposed independent variables which store environment, store layout, shelf design, sales promotion, and salespersons effectiveness are 0.321, 0.258, 0.168, 0.347, 0.227 respectively and their significant level is (sig: 0.000). This indicates a significant causal relationship between the independent variables and the dependent variable.
- The results obtained from the regression analysis show the greatest predictor that influence Egyptian consumers' impulsive buying desire in large retail stores is sales promotion ( $\beta = 0.347$ ) which means the more promotions consumers receive, the higher the unplanned purchases made by consumers. In other words, for every unit of changes in sales promotions, there will be an increase of 0.347 units in impulsive buying desire. The second predictor is store environment ( $\beta = 0.321$ ). The lowest predictor variable is shelf design ( $\beta = 0.168$ ).
- The positive values of the regression coefficients confirm that the impulsive buying desire for Egyptian consumers (dependent variable) moves in the same direction as the independent variables.
- Based on results of **Table 9**, it is possible to develop a mathematical model to predict the ability of large retail stores to generate an immediate desire for Egyptian consumer to make an impulse buying as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

where,  $a$  is a constant;

$Y$  is the dependent variable (Impulsive Buying Desire);

$X_1, X_2, X_3, X_4, X_5$  are the independent variables which are (Store environment, Store layout, Shelf design, Sales promotion, Salespersons effectiveness) respectively.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  are the regression coefficients for the previous mentioned independent variables.

So, the general regression model can be reformulated as follows:

$Y = -0.273 + 0.321$  store environment +  $0.258$  store layout +  $0.168$  shelf design +  $0.347$  sales promotion +  $0.227$  salespersons effectiveness.

## 6. Findings and Discussion

The main objective of this research is to revealing the in-store stimulating factors that generate an impulsive buying desire for Egyptian consumers in large retail stores, and to develop a mathematical model to predict the ability of these stores to generate an immediate desire for Egyptian consumer to make such type of buying. In this regard, the study presented five factors to test their ability to influence Egyptian consumers in attracting them to impulsive buying. These factors are: store environment, store layout, sales promotions, shelf design, and salespersons effectiveness.

The findings reached about the correlation analysis explore that all in-store stimulate factors that were proposed in this study have a positive and strong influence on the generating Egyptian consumers' impulsive buying desire. Correlation coefficient of sales promotion is the highest = 0.803, followed by store environment 0.736., then store layout and salespersons effectiveness 0.718 and 0.647 respectively. Also shelf design factor has positive correlation coefficient with the dependent variable = 0.563. Accordingly, we can say that hypotheses H1, H2, H3, H4, and H5 are accepted.

Furthermore, the results of the multiple regression revealed the relative importance of each factor; sales promotion is the highest influence factor in prompting impulse buying for Egyptian consumers ( $\beta = 0.347$ ,  $p < 0.05$ ). Store environment comes in second place in terms of relative importance ( $\beta = 0.321$ ,  $p < 0.05$ ). Then store layout ranks third in relative importance ( $\beta = 0.258$ ,  $p < 0.05$ ) followed by salespersons effectiveness in fourth place ( $\beta = 0.227$ ,  $p < 0.05$ ). The last factor that the study revealed in terms of relative importance is shelf design ( $\beta = 0.168$ ,  $p < 0.05$ ).

Coefficient of determination "R-Square" for the regression model is 0.776 which means the proposed factors contribute 77.6% in generating Egyptian consumers' impulsive buying desire. So, managers of large retail stores should pay more attention to these factors to generate the desire for the consumer to make an impulsive buying.

Positive  $\beta$  coefficients indicate that, the more  $\beta$  values of store environment, store layout, shelf design, sales promotion, and salespersons effectiveness, the more increasing the desire for Egyptian consumer to make an impulse purchase.

ANOVA results show that the model of this research has been conducted correctly and is valuable for the study. It explains that the independent variables can collectively explain the differences in Egyptian consumers' impulsive buying desire. Overall, the results of this analysis indicate this model as a whole is statistically significant.

## 7. Conclusion and Strategic Implications

Nowadays, in light of the intense competitive environment, impulse buying has become a major factor that should be taken into consideration to increase retail

store sales. So this study provides a comprehensive overview of in-store stimulating factors that lead to generating impulsive buying desire among Egyptian consumers in large retail stores. It is certain that the results reached in this study will help retail store managers to pay more attention to the factors with higher relative importance and consequently, motivate more customers to make impulsive purchases.

The results of this study will be useful for retailers and marketers to understand the causes of the impulsive buying phenomenon among Egyptian consumers more efficiently and thus, develop better sales strategies in light of these results. Furthermore, taking all the different factors presented in this study into consideration can increase sales turnover and thus retail stores profits.

By reviewing previous literature, it was confirmed that there is no a comprehensive model that links both in-store stimulating factors with impulsive buying for Egyptian consumers. Therefore, this study attempts to fill this gap.

We are certain that this research will be of great interest because it provides a comprehensive explanation of the impact of in-store stimulating factors on impulsive buying for Egyptian consumers. If retail managers are aware of the factors on which the consumers rely on to make an impulsive buying decision, it certainly would be easier to take the necessary procedures to reallocate their resources in a way that attract more consumers.

## **8. Recommendations**

Impulse buying has long been a rich field of research and interest area for marketing managers; this is simply because every small quantity of impulse buying during each shopping visit can contribute to significant additional annual sales. Therefore, it is important for managers of retail stores to identify the factors that motivate consumers to make impulse buying.

The results of this study showed the sales promotion activities have the greatest influence on generating impulsive buying for Egyptian consumers. This means the sales promotion incentives play a decisive role in motivating consumers to impulsive buying. In this regard, retail store managers should pay more attention to this factor by offering attractive promotions activities such as price cuts, giving free coupons, gifts, free samples, discounts and free delivery to attract customers towards impulsive buying.

Store environment comes in second place in terms of importance in generating impulsive buying desire among Egyptian consumers. Therefore, retailers should enhance the store environment by using lighting, decor, colors, music, and providing clean atmosphere to create a good image of the store in the consumers' minds. Undoubtedly, the convenience created through the store environment can attract more consumers to make impulsive buying.

Also, the study indicated that there is another notable factor stimulates impulsive buying for Egyptian consumers which is store layout. This variable ranked as the third in importance in generating impulsive buying desire among Egyp-

tian consumers. Therefore, managers of retail stores should provide good layout for their stores to maximize the consumer's convenience and accordingly, encourage more impulsive buying.

In addition, the study revealed the importance of the salespersons effectiveness as a determining factor that leads to generating impulse buying desire for Egyptian consumers. Hence, managers of retail stores must provide a well-trained salesperson that able to deal with consumers' inquiries and can guide them in finding the desired product. The salesperson's friendly behavior through courtesy, respect, and helpfulness can reduce consumers' negative emotions and encourage them to make impulse buying.

Finally, shelf design has emerged as an important factor in stimulate Egyptian consumers to impulsive buying. So, managers of retail stores should provide a large shelf space that allows products to be well displayed, and provide a wide range of products and brands to help consumers to have a variety of choices. Furthermore, managers of retail stores should put more effort to create attractive and eye catching shelf display because the way a product is displayed on the shelf helps consumers to become potential impulsive buyers.

## 9. Future Studies

This study investigated the in-store stimulating factors and its impact in generating Egyptian consumers' impulsive buying desire. However, further studies can be conducted to include other factors such as availability of money, availability of time, personal mood, personal traits, cultural, social, psychological and behavioral factors of Egyptian consumer. The results of these studies will certainly provide us with a comprehensive and in-depth view about all factors that could influence Egyptian consumers and drive them to make impulsive buying in retail stores.

This study has been conducted in Alexandria city only. There is no doubt that there are variations in consumers' behavior depending on where they live. So, it is recommended to conduct similar research in all Egyptian cities. Definitely, the results obtained will be more generalizable.

This study represents a good starting point for further debate and scientific investigation on impulsive buying behavior for Egyptian consumers. In this regard, the researcher recommend taking demographic information into consideration in the future studies to better investigate the influence of proposed factors on Egyptian consumers' impulsive buying. The factors reached or its relative importance may differ according to demographic characteristics of consumers.

Future studies need to examine whether the reached results apply to all products or differ across products.

A comparative study can be conducted between impulsive buying behavior in urban and rural areas in Egypt. There is no doubt that this study will enable retail store managers and marketers to develop appropriate marketing strategies for each area.

The researcher recommends conducting complementary studies using the discriminant analysis to classify large retailing stores based on their ability to generate the impulsive buying desire for Egyptian consumers.

### **Ethical Consideration**

This study was governed by the general rules of scientific research ethics; an official letter was submitted to the university's ethics committee for approval. Furthermore, the respondents were requested to fill out the questionnaire voluntarily and they had the complete freedom to submit/not submit the questionnaire. Their answers were kept confidential and their data was not disclosed. Literature used in this research is cited and mentioned in the references section.

Accordingly, the approval code granted by the University's Scientific Research Ethics Committee was given to the researcher.

### **Conflicts of Interest**

The author declares no conflicts of interest regarding the publication of this paper.

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