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Research Article / *Araştırma Makalesi*

DETERMINANTS OF IMPULSIVE BUYING BEHAVIOUR AND A MODEL PROPOSAL*

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ABSTRACT

Impulsive buying is a sudden, unplanned purchase that the consumer makes without thinking about the consequences. Impulsive buying has become an important economic phenomenon due to the availability of credit cards, the existence of online shopping options, and the spread of shopping mall culture. This study investigates the effects of demographic characteristics, social media, hedonic consumption and conscientiousness on the impulsive buying behaviour of consumers in the city of Ankara, Turkey. Data were collected through face-to-face interviews with 784 customers in 14 shopping centers. Structural equation modelling (SEM) was used to validate the proposed model. The results showed significant relationship between the factors social media, hedonic consumption, conscientiousness and impulsive buying. It is also found that the customers making shopping list have less impulsive buying than those who do not have shopping list, and also women are more impulsive buyer than men.

Keywords: *Impulsive Buying, Conscientiousness, Social Media, Hedonic Consumption, Structural Equation Modelling.*

DÜRTÜSEL SATINALMA DAVRANIŞININ BELİRLEYİCİLERİ VE BİR MODEL ÖNERİSİ

ÖZET

Dürtüsel satınalma, tüketicinin sonuçlarını düşünmeden yaptığı ani, plansız satınalmadır. Günümüzde kredi kartlarının yoğun kullanılması, çevrimiçi alışveriş seçeneklerinin varlığı ve alışveriş merkezi kültürünün yaygınlaşması nedeniyle dürtüsel satınalma önemli bir ekonomik olgu haline gelmiştir. Bu araştırmanın amacı, Ankara ilindeki tüketicilerin dürtüsel satınalma davranışları üzerinde demografik özelliklerin, sosyal medya, hedonik tüketim, alışveriş listesi ve bir kişilik özelliği olarak, düzenli olmanın etkilerini incelemektir. Veriler 14 alışveriş merkezinde 784 müşteri ile yüz yüze görüşülerek toplanmıştır. Önerilen modeli doğrulamak için yapısal eşitlik modellemesi (YEM) kullanılmıştır. Sonuçlar, sosyal medya, hedonik tüketim ve itinalılık faktörleri ile dürtüsel satınalma arasında anlamlı bir ilişki bulunduğunu göstermiştir. Alışveriş listesi yapan tüketicilerin alışveriş listesi olmayanlara göre daha az dürtüsel satın alma yaptıkları, kadınların ise erkeklere göre daha fazla dürtüsel satınalma davranışı gösterdikleri araştırmanın elde ettiği önemli bulgular arasındadır.

Anahtar Kelimeler: *Dürtüsel Satınalma, İtinalılık, Sosyal Medya, Hedonik Tüketim, Yapısal Eşitlik Modellemesi.*

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1. Introduction

The globalization of the world day by day and the competition between companies have made it very difficult for businesses to survive and find a place for themselves in new markets. Therefore, companies have had to look for new sales strategies in order to overcome these issues. With the growth of the market the variety of products offered by companies has increased. This situation has caused many power elements such as quality, price and right of choice, which are monopolized by the companies, to pass to the consumer, and it has made it necessary for the sales strategies of companies to be more "consumer wants and needs" centred (İslamoğlu & Altunışık, 2013).

Since the continuation of the existence of the companies has become dependent on preferences, satisfaction and trust of the target customer population is of vital importance in determining the sales strategies of the companies. Within this context, companies should analyse consumer behaviour in detail in order to determine the most suitable sales strategy and to implement the determined strategy in the best way. For this reason, it is of great importance to examine in detail many characteristics such as need of the consumers for the product, price performance ratio and quality and intended use of the products in the market as well as economic, socio-cultural and psychological features of target population (Çakır & Akel, 2020).

Consumers can buy products that they do not need or have not intended to buy before by making instant decisions with the effect of different reasons when they visit the store for shopping. This type of purchase is called impulsive buying (ImpBuy). The use of "Impulsive Buying" goes to the root of the concept of "impulsive behaviour". Impulsive behaviour means an act that is done suddenly and without thinking, hedonic behaviour. This kind of behaviour form the basis of the concept of impulsive Buying (Rook & Fisher ,1995).

In the researches on purchasing behaviour, the concept of impulsive buying has been discussed from different perspectives for long years. Before 1980s, the studies examined usually effect of customer profile on impulsive buying, and aimed to determine the differences between demographic characteristics of customers in terms of impulsive buying (Kollat &Willett, 1967).

One of the striking results of these studies is that impulsive buying differs by gender. It has been observed that female consumers do not stay engaged to certain stores in the shopping process, but make their decisions after visiting different and more stores and appraising the products and prices. It has also been reported in these studies that women generally engage in more impulsive buying behaviour than men, and see purchasing behaviour as an enjoyable activity (Tifferet & Herstein, 2012).

The main objective of this study is to determine the relationship between impulsive buying behaviour and the factors social media, hedonic consumption, conscientiousness and demographic variables in Ankara province. The research is of explanatory type. Structural equation modelling is used as a statistical tool to find the factors affecting impulsive buying and strength and type of relationship between those significant factors and dependent impulsive buying.

The following parts of the study starts with a conceptual discussion about impulsive buying. The next sections cover methodology and statistical and theoretical discussion of the impulse buying behaviour and possible factors affecting the impulse buying behaviour.

2. Concept of Impulsive Buying Behaviour

Changing times have brought about changes in the competitive situation and, on the other hand, the tastes of consumers, and it has become more important for industries to analyse and understand the factors that can affect consumer purchasing behaviour and develop strategies in this direction (Ratnawat & Borgave, 2019).

2.1. Demographic Factors

In the studies conducted since the beginning of the 2000s, the impulsive buying has provoked researchers to understand the effect of emotional feelings as well as demographic characters behind this behaviour.

Desai (2018) investigated the impact of demographic factors on impulse buying and concluded that gender, income, age and education level play a significant role in impulsive buying behaviour. However, in the study, it was stated that among the demographic factors affecting impulse buying, gender was the most reliable predictor of impulse buying compared to the others.

One of the striking results of studies on impulsive buying is that impulsive buying differs by gender. In many studies, it has been observed that female consumers do not stay engaged to certain stores in the shopping process, but make their decisions after visiting different and more stores and appraising the products and prices. It has also been reported in these studies that women generally engage in more impulsive buying behaviour than men, and see purchasing behaviour as an enjoyable activity (Tifferet & Herstein, 2012). Gohary & Hanzaee (2014) also showed that women enjoy shopping more than men and they did more shopping for hedonic purposes.

2.2. Hedonic Consumption

The fact that consumers started to consume for rational reasons has changed their behaviour over time. Consumption behaviours have become more emotional and consumers have started to enjoy their choices and consumption instead of just buying and consuming what they need (Karataş, 2011).

Hedonic consumption, based on the philosophy of hedonism, can be shortly stated as "pleasure from shopping" (Aytekin & Ay, 2015). A somewhat broader definition of hedonic consumption is provided by Holbrook & Hirschman (1982). They have nicely defined hedonic consumption as "aspects of consumer behaviour related to the multi-sensory, fantasy, and emotional aspects of one's experience with products". That is, the hedonic shopping experience includes multiple sensory modalities such as touch, taste, smell, and sound, and thus is likely to involve creative thinking and lead to emotional impulse.

According to the hedonic consumption view, products and services kept in the mind of the consumer not as objective entities, but as subjective symbols. For the consumer, what the product or service represents and what it evokes is more important than its tangible features (Şahin & Fırat, 2018). The relationship between instant decision, hedonic consumption behaviour (HedCons) have attracted the attention of researchers and consequently many studies have been carried out. The studies in this respect showed that there is a mutual emotional

and psychosocial motivation behind relationship between hedonic consumption and impulsive buying rather than thinking and functional benefits (Chang et al., 2011). Impulsive buying and hedonic consumption are two behaviours that are strongly associated with emotional engagement that creates a shopping experience for consumers (Gunawan, 2016).

2.3. Conscientiousness

From a psychology perspective, personality refers to a stable trait or characteristics. The importance of impact of different personality traits on the buying tendencies was understood in the 1940s. (Ratnawat & Borgave, 2019). Subsequently, the idea that individual personality traits can lead to different purchasing behaviour became the subject of considerable number of marketing research in the 1960s. Although consideration of personality traits in modelling buying behaviour had been became rare in the 1970s due to negative reviews, researchers have more recently (since the 1980s) revisited the issue of personality in consumer behaviour in light of recent advances in personality theory and measurement (Foxall & Goldsmith, 1988).

Emotional and internal structure or personality traits can also affect impulsive buying. Various researchers have studied the effect of some common personality traits on impulsive buying. Verplanken et.al. (2005) indicates that impulsive buying tendency has strong roots in the personality characteristics of consumers.

Gohary & Hanzaee (2014), when investigating the relationship between the five major personality traits and shopping behaviour, found that conscientiousness, neuroticism, and openness are predictors of compulsive buying, impulse buying, and utilitarian shopping. The results also showed that there were significant differences between male and female shoppers in terms of conscientiousness, neuroticism, openness, compulsive buying and hedonic shopping (Tarka et al., 2022).

In most of the studies on the effect of personality traits on impulsive buying, it is seen that the conscientiousness dimension is effective. Conscientiousness is a personality trait defined as “socially determined impulsive control that facilitates task- and goal-directed behaviour such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks” (John & Srivastava, 1999).

Badgaiyan et.al. (2016) also showed that two personality traits, conscientiousness and extraversion significantly affect impulsive buying tendency. In addition, Farid & Ali (2018) found that impulsive buying is significantly related with openness, extraversion, conscientiousness.

Conscientiousness is a concept used to describe a meticulous, well-organized and hardworking person (Costa & McCrae, 1992). These people are reliable, self-disciplined, punctual, organized, ambitious, determined, deliberative, competent, devoted to duty (Pervin, 2006; Maltby et al., 2010), exhibit planned behaviour rather than spontaneous behaviour. (Zurawicki, 2010).

Conscientious people have the ability to control their impulse emotions (Joshanloo et al., 2012). Therefore, it has been shown that there is a negative relationship between impulsive behaviour and conscientiousness (Gustavsson et al., 2003).

2.4. Social Media

As Khokhar et al. (2019) mentioned after communication technology has introduced innovations such as social networking websites, social media platforms have also used to discuss ideas and experiences about a product or service. "*As a result, it influences the approaches in which people have an effect on each other's behaviours, sentiments, and convictions. In addition, consumer's buying possibilities have been extended with the use of internet as the accessibility of products and services multiplied and it becomes easy to make a purchase"* Khokhar et al. (2019).

As a tool that enables people to communicate easily with each other, social media gives an opportunity to marketers to reach consumers easily and offers different interaction options (Appel et al., 2020:79). The use of social media to promote the company and its products is known as social media marketing. There are different web-based strategies, including e-mails, newsletters and other techniques that are used and are part of online marketing (Nadaraja & Yazdanifard, 2013). Social Media allows firms to engage in timely and direct end-consumer contact at relatively lower cost and higher levels of efficiency than can be achieved with more traditional means of communication (Kaplan & Haenlein, 2010).

Social media has changed the way people communicate with each other, as well as their consumption habits. The concept of "marketing convenience" brought by social media (Jacobson et al., 2011) means that consumers evaluate products by taking into account user comments and order easily through almost all social media platforms. In addition, businesses can easily reach consumers through social media and can use many channels at the same time to influence them (Çopuroğlu, 2021). Social community members can be influenced by other members' opinions and tendencies about a product or service, and thus the information obtained can be influential in the impulsive purchase of that product (Sudha & Bharathi, 2018). Social media can cause impulsive buying directly or indirectly through hedonic consumption. Therefore, hedonic consumption may play a mediating role in the impact of social media on impulsive buying (Kurt, 2019).

3. Research Hypotheses

In this study, the main hypothesis is that there is relationship between impulsive buying and variables discussed above are explored along the hypotheses listed below:

H1: There is a direct effect of age on impulsive buying behaviour

H2: There is a direct effect of gender on impulsive buying behaviour

H3: There is a direct effect of marital status on impulsive buying behaviour

H4: There is a direct effect of work status on impulsive buying behaviour

H5: There is a direct effect of education level on impulsive buying behaviour

H6: There is a direct effect of making shopping list on impulsive buying behaviour

H7: There is a direct effect of hedonic consumption on impulsive buying behaviour

H8: There is a direct effect of conscientiousness on impulsive buying behaviour

H9: There is a direct effect of social media on impulsive buying behaviour

H10: There is an indirect effect of social media on impulsive buying behaviour

4. Methodology

4.1. Research Method

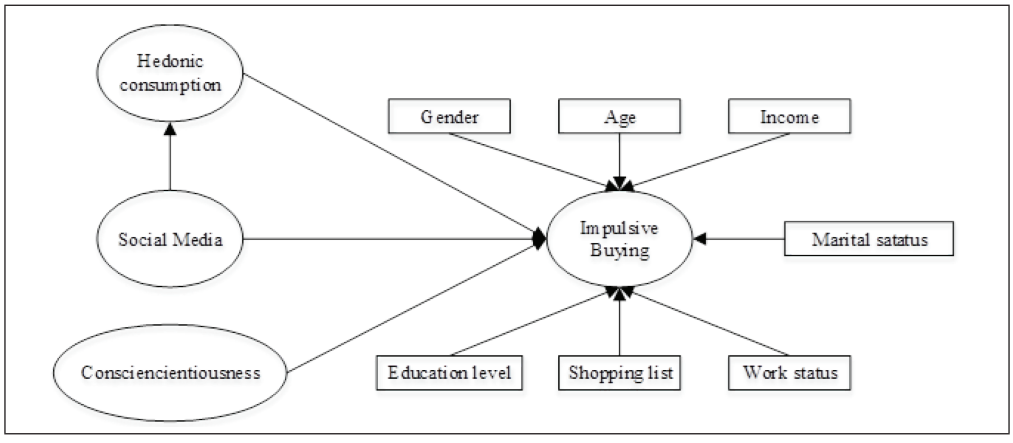
Considering both the frequency of use and the areas in which it is used, the structural equation model has become the choice of many researchers, especially from the beginning of the 2000s to the present. The use of structural equation modelling in many fields is increasing gradually due to its ability to analyse latent variables and the presence of residuals in the analysis, the visual interfaces offered by statistical analysis programs and the theoretical model structure (Kaplan, 2001). While most of the statistical analyses apart from the structural equation modelling aims to discover the relationships between the variables, the SEM is to test the previously determined relationships (Meydan & Şeşen, 2011:6).

Because SEM measures the significance of a theoretical model, one of the most important components is theory about phenomena. While the model is being set up, the researcher should have a good knowledge about the theory. Then, the path diagram should be created that will best represent the theoretical structure. The model should be tested using CFA, path analysis, and regression analysis with sample data. Next, the fit of the model is evaluated according to the goodness-of-fit indices to determine how well the model fits the data. If necessary, the model can be improved and retested according to the fit indices. After the model reaches the final stage, if its suitability is accepted, the results can be interpreted (Çelik & Yılmaz, 2016:1-6).

4.2. Research Model

In this study, a theoretical structural equation model is constructed with the variables that are predicted to have an effect on impulsive buying. This theoretical research model is given in Figure 1. Here, it is assumed that the factors hedonic consumption, Conscientiousness and social media directly explain the variability of impulsive buying behaviour of individuals, and also the variable social media may have an indirect effect by using hedonic consumption as a mediating factor. At the same time, it has been pre-assumed that the demographic variables gender, age, income, education level, marital status and work status may also have a direct effect on impulsive buying. Additionally, the binary variable shopping list denoting the availability of shopping list when shopping.

Figure 1: Theoretical Model



4.3. Research Sample

Sample selection is of great importance so that the sample can represent the population and the errors caused by selection of sample can be minimized. Ankara has a population of 4709929, of which is 3761488 are over the age of 18. The sampling procedure is carried out in several stages, and thus multi-stage stratified cluster sampling method is followed for the research design (Yamane, 2006: 389-405). Firstly, the 36 shopping malls in the central districts of Ankara are stratified into 3 groups according to the socio-economic status of the district they are located in: high, medium, and low. In the second stage, the shopping malls are randomly selected in proportion to the number of customers of shopping malls from each stratum by cluster sampling. Thus, 4, 8 and 3 clusters are selected from each of 3 stratums, respectively.

The total sample size is calculated as 784 with a 0.95 confidence level and a margin of error d=3.5. In the final stage, the sample size is distributed proportionally to the stratums and thus, the size of ultimate sampling units for each stratum are calculated as 208, 562 and 14 visitors, respectively. The sampling design and calculations are shown in Table 1 (Yamane, 2006: 146-153).

Table 1: Number of Shopping Malls and Sample Sizes

Socio-Economic Status	Number of shopping mall	Average Number of Customers per Week (thousand)	Proportion to size	Sampled number of shopping malls	Sample size
High	8	1306	0.266	4	208
Middle	20	3522	0.717	8	562
Low	8	82	0.017	3	14
Total	36	4910	1.000	14	784

4.4. Data Collection Method

The research data is collected by face-to-face survey technique. The distribution of the subjects in the sample according to their demographic characteristics is given in the Table 2.

The distribution of the sample according to demographic variables approximately represents the distribution of the population of Ankara. The sample is roughly represented in terms of gender, with 46.2% male and 53.8% female. The largest age groups are 26-32 and 33-40, respectively. Most individuals have a Bachelor's degree, and this is followed by two-year degree and high school graduates.

Table 2: Demographic Characteristics of Sample

Demographic Variable	Group	Frequency	%
Gender	Male	379	46.2
	Female	441	53.8
Shopping list	Yes	697	85.0
	No	123	15.0
Age	18-25	146	17.8
	26-32	288	35.1
	33-40	165	20.1
	41-48	123	15.0
	49-	98	12.0
Education Level	Primary school	24	2.9
	Middle school	48	5.9
	High school	121	14.8
	Two-year degree	90	11.0
	Bachelor's degree	471	57.4
	Post-graduate	66	8.0
Marital Status	Married	405	49.4
	Single	415	50.6
Work Status	Student	71	8.66
	Unemployed	91	11.1
	Other	131	15.98
	Housewife	60	7.32
	Worker	229	27.92
	Government officer	222	27.07
	Retired	16	1.95
Income	Less than 2000 TL	93	11.3
	2000 TL-4000 TL	267	32.6
	4001 TL-6000 TL	215	26.2
	6001 TL-8000 TL	105	12.8
	More than 8000 TL	140	17.1

4.5. Data Collection Tool: The Questionnarie

The questionnaire implemented in the research consists of 5 parts. The first part of the questionnaire includes questions about demographic characteristics of individual visitors. The second part consists of items of four factors: impulsive buying, social media, conscientiousness and hedonic consumption. Some scales in the literature are used for factor definitions.

The impulsive buying factor have 7 items and comes from Rook & Fisher (1995). The number of items of conscientiousness factor is two and are taken from Badgaiyan et.al. (2016) personality scale. Finally, the social media scale consists of 5 items and is used from Al-Zyoud (2018) and the scale for hedonic consumption factor with 7 items is given by Aytekin & Ay (2015), which is mix of Turkish adaptation of Yu & Bastin (2010) and Babin et. al (1994) with their additional items.

Thus, the questionnaire consists of 28 questions in total, 7 of which are demographic and the other 21 are 5-point Likert type scaled questions with options strongly disagree (1), disagree (2), undecided (3), agree (4) and strongly agree (5). The impulsive buying subscale consisted of 7 items ($\alpha = 0.822$), the social media subscale consisted of 5 items ($\alpha = 0.828$), the conscientiousness subscale consisted of 2 items ($\alpha = 0.751$) and the hedonic consumption subscale consisted of 7 items ($\alpha = 0.936$). The overall scale inventory was found to be highly reliable (21 items; $\alpha = 0.829$).

The questions regarding the factor items in the questionnaire, the definitions of demographic variables and the abbreviations to be used in the following analyses are given in Table 3.

Table 3: Latent and Observed Variables

Variable type	**Statement**	**Symbol**
	Gender	Gender
	Shopping list	ShopList
	Marital status	MariSta
	Work status	WorkSta
	Education level	Educ
	Age	Age
	Income	Income
Latent	**Impulsive buying**	**ImpBuy**
Observed	I often buy things without thinking.	S1
Observed	“I see it, I buy it” describes me.	S2
Observed	I often buy things spontaneously.	S3
Observed	“Just do it” describes the way I buy things.	S4
Observed	“I see it, I buy it” describes me.	S5
Observed	“Buy now, think about it later” describes me.	S6

Table 3 continued

Observed	I buy things according to how I feel at the moment.	S7
Latent	**Social Media**	**SocMed**
Observed	I use social media as a source of information.	S8
Observed	Social media managed to empower me over the years.	S9
Observed	I find social media attractive and easy to use.	S10
Observed	I spend my free time browsing social media websites.	S11
Observed	I am attracted to the concept of purchasing through social media.	S12
Latent	**Conscientiousness**	**Cons**
Observed	I see myself as dependable, self-disciplined.	S17
Observed	I see myself as disorganised, careless.	S18
Latent	**Hedonic Consumption**	**HedCons**
Observed	Shopping activity makes me happy.	S23
Observed	Shopping activity makes me feel relaxed.	S24
Observed	Shopping is fun.	S25
Observed	Finding new things makes me excited.	S26
Observed	I enjoy being immersed in exiting new products.	S27
Observed	I can forget my troubles during shopping.	S28
Observed	Shopping is a wonderful experience.	S29

5. Data Analysis

5.1. Assessment of Normality

Generally, maximum likelihood (ML) is used as the standard estimation approach in SEM. However, this approach requires a multivariate normal distribution of the variables used in the analysis. Violation of this assumption leads to an increase in the chi-square value and thus a false rejection of the candidate model. It also causes underestimation of standard errors (i.e. bias). The implication of bias is incorrect inferences in testing of model parameters (path coefficients, covariance among factors or residuals) (Çelik & Yılmaz, 2016:26).

Univariate normality of variables is necessary but not sufficient for multivariate normality (Byrne, 2010). The value of most widely used Mardia's multivariate normality check greater than 5 should be considered as an indication of deviation from multivariate normality.

The individual and multivariate kurtosis and skewness values are given in the Table 4. As it can be seen most of critical ratios (c.r.) for both skewness and kurtosis of individual variables and also for multivariate distribution are outside the interval [-1.96, 1.96]. Thus, it can be concluded that the data is non-normally distributed.

In non-normality case, various strategies such as deleting outlying values, using multivariate normality-free estimation procedures such as ADF, MLR, corrected test statistics (Satorra-Bentler scaled chi-square) or using bootstrapping methods can be alternative in SEM

analysis (Çelik & Yılmaz, 2016: 27). Since estimation methods for non-normally distributed data usually require large samples, the bootstrap ML method is used in this study. In the bootstrap estimation, the number of bootstrap samples is chosen as 5000, and the model coefficients are estimated accordingly.

Table 4: Single and Multivariate Normality Test

Variable	min	max	skew	c.r.	kurtosis	c.r.
WorkSta	1.000	8.000	-.794	-9.286	-.315	-1.843
MariSta	1.000	2.000	-.024	-.285	-1.999	-11.68
Educ	1.000	6.000	-1.121	-13.102	.545	3.184
ShopList	1.000	2.000	1.960	22.918	1.843	10.774
Income	1.000	5.000	.329	3.846	-.945	-5.524
Gender	1.000	2.000	-.152	-1.773	-1.977	-11.556
Age	1.000	5.000	.439	5.137	-.862	-5.036
S26	1.000	5.000	-.888	-10.382	.061	.355
S7	1.000	5.000	.331	3.865	-1.154	-6.745
S6	1.000	5.000	.904	10.569	-.546	-3.189
S5	1.000	5.000	.451	5.274	-1.210	-7.074
S4	1.000	5.000	1.116	13.043	-.091	-.531
S3	1.000	5.000	.232	2.709	-1.278	-7.470
S2	1.000	5.000	.232	2.716	-1.305	-7.629
S1	1.000	5.000	.508	5.933	-1.070	-6.255
S18	1.000	5.000	.919	10.740	.280	1.638
S17	1.000	5.000	1.461	17.084	1.788	10.449
S12	1.000	5.000	-.025	-.294	-1.366	-7.983
S11	1.000	5.000	-.191	-2.233	-1.241	-7.256
S10	1.000	5.000	-.567	-6.634	-.796	-4.655
S9	1.000	5.000	.116	1.354	-1.333	-7.790
S8	1.000	5.000	-.488	-5.701	-1.005	-5.874
S29	1.000	5.000	-.800	-9.355	-.095	-.557
S28	1.000	5.000	-.992	-11.592	.308	1.800
S27	1.000	5.000	-.908	-10.616	-.008	-.045
S25	1.000	5.000	-.826	-9.662	.008	.047
S24	1.000	5.000	-.799	-9.338	-.039	-.227
S23	1.000	5.000	-.889	-10.391	.124	.727
Multivariate					96.643	33.759

5.2. Goodness of Fit Measures

Goodness-of-fit measurements and their threshold values showing how fit the model to the data are given in Table 5. According to most of the calculated index values, the impulsive buying theoretical model does not fit the data well.

Table 5: Goodness of Fit Measures

Indices	Good fit	Acceptable fit	Computed index value
CMIN	< 3	< 5	6.249
GFI	≥ 0.90	≥ 0.85	0.835
IFI	≥ 0.95	≥ 0.90	0.807
CFI	≥ 0.95	≥ 0.90	0.806
RMSEA	≤ 0.05	< 0.08	0.080

5.3. Estimation of Model Coefficients

It is not meaningful to interpret the estimated coefficients because the model's Goodness of fit measures are not satisfactory. However, a way can be determined by looking at the significance of the regression coefficients to determine what can be done to improve the model.

SEM unstandardized coefficients and bootstrap confidence intervals estimated with bootstrap maximum likelihood are given in Table 6. The p values show that only Gender and ShopList from demographic variables are significantly effective on Impulsive buying behaviour. On the other hand, it is seen that all three factors Conscientiousness, SocMed and HedCons significantly explain the Impulsive Buying behaviour of individuals. In addition, the relationship between HedCons and SocMed is significant.

Table 6: Estimation of Coefficients

Parameter			Standardized Estimate	Estimate	Lower	Upper	p
HedCons	←	SocMed	0.138	0.12	0.034	3.508	***
ImpBuy	←	Age	-0.015	-0.011	0.025	-0.424	0.672
ImpBuy	←	Gender	0.338	0.608	0.069	8.81	***
ImpBuy	←	Income	0.07	0.05	0.025	1.958	0.05
ImpBuy	←	ShopList	-0.124	-0.312	0.09	-3.449	***
ImpBuy	←	Educ	0.021	0.016	0.027	0.59	0.555
ImpBuy	←	Cons	0.099	0.128	0.082	1.565	0.118
ImpBuy	←	SocMed	0.112	0.091	0.032	2.832	0.005
ImpBuy	←	HedCons	0.091	0.085	0.035	2.445	0.015
ImpBuy	←	MariSta	-0.039	-0.021	0.064	-0.33	0.741

Table 6 continued

ImpBuy	←	Occup	-0.012	-0.019	0.017	-1.089	0.276
S23	←	HedCons	0.838	1			
S24	←	HedCons	0.786	0.94	0.035	27.011	***
S25	←	HedCons	0.856	1.031	0.033	30.923	***
S27	←	HedCons	0.813	1.002	0.035	28.424	***
S28	←	HedCons	0.899	1.08	0.032	33.629	***
S29	←	HedCons	0.71	0.858	0.037	23.302	***
S8	←	SocMed	0.822	1			
S9	←	SocMed	0.686	0.883	0.046	19.194	***
S10	←	SocMed	0.668	0.779	0.042	18.665	***
S11	←	SocMed	0.672	0.825	0.044	18.761	***
S12	←	SocMed	0.659	0.827	0.045	18.397	***
S17	←	Cons	0.659	1			
S18	←	Cons	0.564	0.913	0.608	1.5	0.134
S1	←	ImpBuy	0.654	1			
S2	←	ImpBuy	0.613	0.955	0.065	14.691	***
S3	←	ImpBuy	0.742	1.136	0.067	17.024	***
S4	←	ImpBuy	0.547	0.776	0.058	13.35	***
S5	←	ImpBuy	0.511	0.825	0.066	12.565	***
S6	←	ImpBuy	0.683	0.991	0.062	16.023	***
S7	←	ImpBuy	0.64	0.982	0.064	15.222	***
S26	←	HedCons	0.85	1.03	0.034	30.576	***

5.4. Improvement of Model

Removing the non-significant variables age, income, education, marital status and work status from the model may improve the model's goodness-of-fit values. SEM is re-estimated by removing the non-significant explanatory variables from the model.

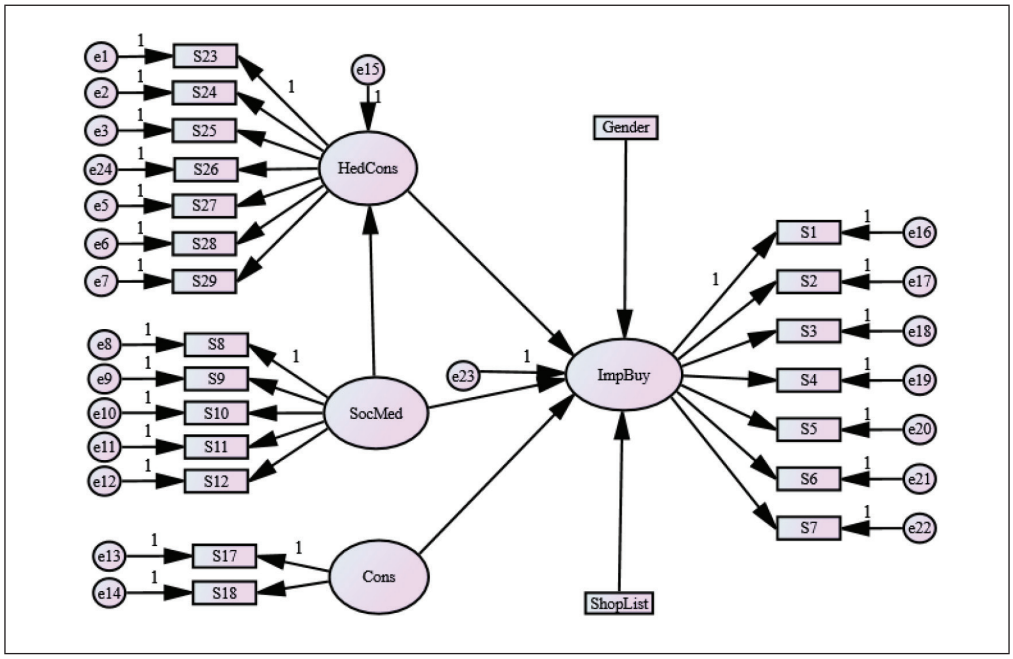
In order to prevent the effect of interaction of variables in the process of dropping the non-significant relationships between the variables from the model, the relationships from the model was dropped in such a way that a single relationship was dropped at each step, and the fit tests are re-calculated for the revised model at each step. The largest p value is used as the criterion in the selection of the variable to be dropped from the model. This process is continued until all the remaining variables in the model are significant, and finally the revised model given in Figure 2.

The goodness of fit measures of the final revised model are given in Table 7. The goodness of fit indices are in the acceptable range. The results support the fitness of the model.

Table 7: Goodness-of-Fit Measures for The Revised Model

Indices	Good fit	Acceptable fit	Computed index value
CMIN/df	< 3	< 5	3.377
GFI	≥ 0.90	≥ 0.85	0.924
IFI	≥ 0.95	≥ 0.90	0.934
CFI	≥ 0.95	≥ 0.90	0.934
RMSEA	0.05	< 0.08	0.054

Figure 2: Revised SEM



The standardized regression weights given in Table 8 show that all relationships defined in revised model are significant ($p < 0.05$). The lower and upper columns refer to 95% confidence intervals (bias-corrected percentile method).

Among the demographical characteristics, only the variables gender (1: Male, 2: Female) and shopping list (1: Yes, 2:No) significantly affect the impulsive buying and thus the hypotheses given in H2 and H6 are supported. The fact that the sign of the gender coefficient is positive indicates that women has more average impulsive buying score than men. On the other hand, those who do not make shopping lists do more impulsive buying than those who make lists.

All three of social media, conscientiousness and hedonic consumption have a positive and significant effect on impulsive buying, then the hypotheses given in H7, H8 and H9 are

supported. In other words, an increase in these features of the customers also increases the impulsive buying tendency. In summary, 1 standard deviation increase in social media, hedonic consumption and conscientiousness scores causes an increase of 0.115, 0.097 and 0.099 standard deviations in the impulsive buying score, respectively. In addition, the relationship between social media and hedonic consumption was also found to be positively significant. An increase of 1 standard deviation in the social media score creates an increase of 0.138 standard deviation in the hedonic consumption score.

Table 8: Standardized Regression Weights of Revised Model

Parameter			Estimate	Lower	Upper	p
HedCons	←	SocMed	.138	.059	.213	.001
ImpBuy	←	ShopList	-.137	-.209	-.062	.000
ImpBuy	←	Cons	.099	.022	.193	.022
ImpBuy	←	SocMed	.115	.028	.193	.010
ImpBuy	←	HedCons	.097	.027	.172	.009
ImpBuy	←	Gender	.344	.278	.412	.000
S23	←	HedCons	.838	.800	.872	.000
S24	←	HedCons	.786	.746	.825	.000
S25	←	HedCons	.856	.815	.889	.001
S27	←	HedCons	.813	.767	.852	.000
S28	←	HedCons	.899	.871	.923	.001
S29	←	HedCons	.710	.656	.760	.000
S8	←	SocMed	.822	.780	.857	.001
S9	←	SocMed	.686	.630	.735	.000
S10	←	SocMed	.668	.613	.718	.000
S11	←	SocMed	.672	.611	.726	.000
S12	←	SocMed	.660	.608	.710	.000
S17	←	Cons	.699	.378	1.713	.000
S18	←	Cons	.532	.214	.957	.001
S1	←	ImpBuy	.655	.601	.708	.000
S2	←	ImpBuy	.615	.558	.673	.000
S3	←	ImpBuy	.743	.690	.787	.001
S4	←	ImpBuy	.549	.486	.610	.000
S5	←	ImpBuy	.512	.447	.575	.000
S6	←	ImpBuy	.685	.629	.734	.001
S7	←	ImpBuy	.643	.585	.698	.000
S26	←	HedCons	.850	.807	.885	.001

In the theoretical model, by defining a relationship from social media to hedonic consumption, it is investigated the mediation role of hedonic consumption.

The standardized direct (unmediated) effect of SocMed on HedCons is 0.138, while the standardized indirect (mediated) effect is 0.000. Thus, it is not concluded that HedCons is a mediating factor for SocMed since total effect of SocMed on ImpBuy is totally due to direct effect. Thus, the hypothesis H10 is rejected. When SocMed goes up by 1 standard deviation, HedCons goes up by 0.138 standard deviations.

6. Conclusion

In this study, the relationships between impulsive buying and conscientiousness as a personality trait, social media, hedonic consumption and demographic characteristics of consumers are investigated with the help of structural equation modelling.

The SEM analysis here shows that, only gender are significantly effective while other demographic characteristics work status, marital status, educational status, age and income level hypothesed through H1, H3-5 have no effect on impulsive buying. In addition, making shopping list is also significantly and negatively explain impulsive buying behaviour (H1). That is if someone has a shopping list, she or he has negative tendency towards impulsive buying. According to gender, women are more impulsive buyer than men. This result is inline with the outcomes of many studies such as Giraud (2001), Tifferet & Herstein (2012). Tulungen (2013), Akçay & Özdemir (2019). Tulungen (2013) interprets that this result is reasonable because "women are more comfortable and happier all over the shopping areas" and "usually shop quite willingly".

The present study also reveals that the making shopping list has negative effect on impulsive buying Customers making shopping list have less impulsive buying than those who do not have shopping list.

In recent years, shopping malls have become places where consumers can benefit from various activities at the same time and have a pleasant time, rather than being a set of stores where consumers shop. This can trigger hedonic emotions and cause impulsive buying. The outcome of this study supports that hedonic consumption has a positive effect on impulsive buying. This is similar to the results of Semiz (2017), Aytekin & Ay (2015), Babin et al. (1994) and Yu & Bastin (2010).

The hypothesis H9 is supported, and thus the use of social media has a positive direct effect on impulsive buying, while has no indirect effect. It also significantly explains hedonic consumption. Among many studies, Aragoncillo & Orús (2018), Al-Zyoud (2018), Chen et al. (2019), obtained similar results. Social media has become a very common advertising platform and stimulates consumers to buy unintended products.

Regarding conscientiousness as a personality trait, the results demonstrate also there exists a positive correlation with impulsive buying. In other word, the statement given in the hypotheses H8 is supported. This outcome would reasonable be expected since disorganized personality leads to impulsive buying behaviour.

Some studies on impulsive buying have investigated the impact of objective variables such as price, discounts or customer satisfaction on impulsive buying (Gupta et al., 2021), while some others investigated the effect of physical features of shopping environment on impulsive buying. In some other studies, the mediating roles of psychological variables were examined. In addition to looking at the mediating role of positive mood (Muhammad et al., 2019), it also included personal traits among the independent variables. The studies in the literature, impulsive buying has generally been tried to be explained according to objective variables or personal traits have been taken into account as well as some psychological factors. In this study, along with psychological factors such as hedonic consumption and conscientiousness, social media was included in the model as a mediating variable. It is based on the thesis that social media mediates hedonic consumption. In addition to these, it is based on the thesis that many demographic variables are effective on impulse buying. Thus, unlike the others, this study has a broader perspective in that it considers many psychological factors, shopping list and objective demographic variables together.

Marketers should take advantage of impulse buying. Social media influencers and greater consumer engagement on social media can encourage impulsive buying. In addition, the tendency of female consumers to buy more impulsive indicates that strategies can be developed to stimulate their main purchasing emotions.

In this study, limited number of latent factor and observed variable are considered to explain the impulsive buying behaviour of customers, and in an improved version of this study, possibly more factor related to personality could be added to the model. In particular, more characteristics defining personality could be considered, and also one trait of personality can be extended with more item scales.

In this paper, the principles of Research and Publication Ethics are followed.

Conflict of Interest

The authors have no conflicts of interest to declare.

Contribution Statement

The authors contributed to this study equally.

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