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Research Article

To Buy or Not to Buy Foreign Currency: The Interplay between Fear of Missing Out, Unplanned Buying Behavior and Post-Purchase Regret

Serdar Ögel [1]

Abstract

Since last six months, there has been an increase in foreign currency buying behaviors of individuals to protect the value of their assets due to dramatic increase in the value of foreign currencies against Turkish liras. However, besides the increase in the value of foreign currency against Turkish liras, the interactions among individuals stimulate them to purchase foreign currencies. In this context, the objective of the research is to explore the interplay between fear of missing out, unplanned buying behavior and post-purchase regret with respect to foreign currency buying behavior. Herein, fear of missing out is set as an independent variable; whereas unplanned buying behavior is determined as a variable that mediates the linkage between fear of missing out and post-purchase regret. The data are gained from 392 participants by employing convenience sampling. In an attempt to explore the proposed links between the variables, structural equation modelling is utilized. The findings report that fear of missing out significantly and positively influences unplanned foreign currency buying behavior of individuals and their post-purchase regret; while unplanned foreign currency buying behavior significantly and positively influences their post-purchase regret towards buying foreign currency. Besides, the findings indicate that unplanned foreign currency buying behavior partially mediates the link between fear of missing out and post-purchase regret. Overall, by shedding a light on understanding foreign currency buying behavior of individuals in last six months, the results of the study also contribute to individuals to realize their future foreign exchange buying behavior in a more planned way.

Keywords: Foreign Currency, Fear of Missing Out, Unplanned Buying Behavior, Post-Purchase Regret

JEL Codes: G40, G41, G50

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Araştırma Makalesi

Döviz Almak ya da Almamak: Kaçırma Korkusu, Plansız Satın Alma Davranışı ve Satın Alma Sonrası Pişmanlık Arasındaki Etkileşim

Serdar Ögel [1]

Öz

Son altı ay içinde Türk lirasına karşı döviz kurlarında yaşanan ani yükselişler ve bireylerin özellikle birbirlerinin döviz satın alma davranışlarından etkilenerek daha fazla döviz satın alma davranışına yönelmeleri dikkat çekmiştir. Bu kapsamda bu çalışma, kaçırma korkusu, plansız satın alma davranışı ve satın alma sonrası pişmanlık arasındaki ilişkiyi bireylerin döviz satın alma davranışları çerçevesinde incelemeyi amaçlamaktadır. Çalışmada kaçırma korkusu bağımsız değişken olarak belirlenirken, plansız satın alma davranışı, kaçırma korkusu ve satın alma sonrası pişmanlık arasındaki ilişkide aracı değişken olarak belirlenmiştir. Çalışmanın örneklemine kolayda örnekleme yolu ile ulaşılmış ve veriler 392 katılımcıdan toplanmıştır. Değişkenler arasındaki ilişkileri analiz etmek için yapısal eşitlik modelinden faydalanılmıştır. Çalışmanın bulguları, kaçırma korkusunun, plansız döviz satın alma davranışı ve satın alma sonrası pişmanlığı anlamlı ve olumlu yönde etkilediğini; plansız döviz satın alma davranışının ise satın alma sonrası pişmanlığı anlamlı ve olumlu yönde etkilediğini göstermiştir. Ayrıca elde edilen bulgular, plansız döviz satın alma davranışının, kaçırma korkusu ve satın alma sonrası pişmanlık arasındaki ilişkide kısmi aracılık etkisinin bulunduğunu göstermiştir. Bulgular, son altı ay içinde döviz satın alımı gerçekleştirmiş bireylerin satın alma davranışlarının anlaşılmasına ışık tutarken, bireylerin gelecekteki döviz satın alma davranışlarını daha planlı şekilde gerçekleştirmelerine katkı sağlamaktadır.

Anahtar Kelimeler: Döviz, Kaçırma Korkusu, Plansız Satın Alma Davranışı, Satın Alma Sonrası Pişmanlık

JEL Kodlar: G40, G41, G50

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1. Introduction[1]

Human behavior is inherently a complex action which is affected by various factors and actors. Accordingly, human behavior is not rational all the time, because humans are naturally in tendency of making bias and taking emotional decisions as they are connecting with each other (Punturaumporn, 2019). The connections and interactions among humans dramatically influence their behaviors particularly under ambiguous conditions like financial crisis, pandemics and other uncertain conditions. Since there is no more information under such situations, humans are more likely observe and follow the actions of others as a reference point, which in turn leads to more unplanned behaviors and unusual behavior patterns (Kirk and Rifkin, 2020). For instance, during increasing volatility in foreign currency value stimulated by Covid-19 pandemic particularly in last six months, several irrational behaviors of individuals have been observed. As the value of foreign currencies dramatically increases against Turkish liras, individuals prefer to buy foreign currency to protect the value of their assets. Beyond, as the more individuals were buying foreign currencies, others have followed the same behavior due to fear of missing out (FMO) without elaborately thinking over their actions. Nevertheless, various individuals, who have bought foreign currencies because of being influenced by others, have experienced post-purchase regret after foreign currencies have dramatically lost their value against Turkish liras.

In relevant literature, there are only a few numbers of recent studies which have examined buying behavior from the perspective of currency depreciation (Bakri et al., 2021), and foreign currency borrowing and risk-hedging behavior (Aiba et al., 2018). However, there is not any study which fully concentrates on understanding foreign currency buying behavior of individuals. In this study, FMO is used as an underlying reason of unplanned foreign currency buying behavior of individuals and their post-purchase regrets because FMO is mostly delineated as keeping linked with what other people do (Przybylski et al., 2013). Individuals are frequently stimulated by FMO to immediately purchase what others purchase, although they do not need to purchase. Accordingly, FMO is one of the well-known constructs to explain the consumption patterns and behaviors of individuals (Kang et al., 2019). Beyond, FMO is more likely to result in some unplanned behaviors (Kirk and Rifkin, 2020) and negative post purchase behaviors such as post-purchase regret (P-PR) (Good and Hyman, 2021). However, little has been known about FMO particularly to explain financial behaviors of individuals due to lack of empirical evidence. On the other hand, unplanned buying behavior (UnP) is a behavior which is characterized as no intention to buy but actual purchases (Kollat and Willet, 1967). This explains why UnP frequently also leads to P-PR (Saleh, 2012). Hence, UnP can trigger individuals to feel P-PR, as well as FMO does.

Based on discussion stated above, this present study concentrates on exploring the interaction between FMO, UnP and P-PR to explain foreign currency buying behavior of individuals in last six months. The results of the study ensure fruitful contributions to relevant literature and practice in several aspects. First, this study extends the previous research on FMO by providing a conceptual framework that incorporates FMO and UnP simultaneously in a financial behavior standpoint. Second, the findings of the study ensure contribution to extant literature by revealing the mediating impact of UnP on the linkage between FMO and P-PR to explain foreign currency buying behavior of individuals. Beyond, the findings of the study ensure applicable insights to individuals and practitioners by figuring out the importance of

[1] The Ethics Committee Permission for this study has been obtained from the Ethics Committee of the University of Afyon Kocatepe with decision no: 2022/19 on the date of 14.01.2022.

decreasing speculation and interaction among individuals which lead to FMO and UnP during financial uncertainties.

The study is organized as follows. The constructs of FMO, UnP and P-PR are initially discussed. After that, a conceptual model designed for the study is given and hypotheses on the basis of suggested relationship among constructs are established. Next, methodology of the study is presented with respect to sampling and data collection procedure, instrument design and data analysis. Afterwards, the findings are presented and debated. Then, conclusions and implications of the findings are elaborated. Finally, limitations regarding the study are indicated and suggestions for future research are identified.

2.Literature Review

2.1.Fear of Missing Out (FMO)

Individuals have a natural drive to asses themselves, frequently in comparison to others (Festinger, 1954). This drive enables individuals to mitigate their anxiety about themselves and makes them find an answer to the question like "what should they do" (Gibbons and Buunk, 1999). When there is a lack of information or objective criteria, the answer for this question is hidden in the actions of others. So, actions of others can be used as benchmark by individuals for their self-evaluation. In such context, individuals intentionally or unintentionally pursue and gather information about others' actions and equate themselves with others to assess their own actions (Festinger, 1954). As a result, depending on social comparison, individuals experience unease when they feel anxiety of missing out about what others do (Baker et al., 2016). This is popularly known as FMO.

In extant literature, FMO is commonly delineated as an extensive fear or anxiety felt by individuals when others may be performing more rewarding things than they do (Przybylski et al., 2013). FMO can also be regarded as an innate need of individual to evaluate their own-wellbeing as regards to that of others (Festinger, 1954). Accordingly, FMO is treated as an emotional experience that comes from an irresistible fear that individuals may feel when they miss out a rewarding action (Argan & Argan, 2019). In such context, FMO can be used as a construct to explain foreign currency buying behavior of individuals in Turkey in last six months because many individuals bought foreign currencies just not to miss out the opportunity while others are making more money.

2.2. Unplanned Buying Behavior (UnP)

Under uncertain times, individuals are more likely to display unexplained and unusual behaviors, since primitive section of their brain, which has considerably deficiency in rational thinking, usually seizes the control and prompt them to take an action (Dodgson, 2020). As previous studies on UnP have presented that this behavior is very common in the marketplace (e.g., Thomas and Garland, 1996; Weun et al., 1998).

UnP is mostly delineated as buying behavior of individuals that has not been planned by them in advance (Hwang, 2011). It is also defined as a buying behavior performed without an intention for buying before actual purchase (Engel et al.,1982). Although all unplanned behaviors are not impulsive every time UnP is often deemed as the synonymous of "impulse buying" (Cobb and Hoyer, 1986). With respect to impulse buying, it can be delineated as a sudden and strong urge to purchase something in an immediate manner (Rook, 1987). So, although UnP has been mostly well-documented in consumer buying behavior context as regards to different product categories in relevant literature (e.g., Amiry et al., 2017; Cheng et al., 2021; Kwon and Trail, 2010; Saleh, 2012;), individuals can also undertake unplanned buying behaviors, while they are buying foreign currencies. In this context, UnP is used in this

study as a construct which is driven by FMO to explain foreign currency buying behavior of individuals in Turkey in last six months.

2.3. Post-Purchase Regret (P-PR)

Individuals may sometimes in doubt that whether their decisions and actions are correct. They are in tendency to compare the things that they purchased with the alternatives they have decided not to purchase (Shankar et al., 2006). The comparison often results in a psychological grief and pain which is popularly known as P-PR. Accordingly, when individuals considers that their buying decisions and actions are not correct, they frequently feel regret (Heitmann et al., 2007). Although it is not necessary that all buying behaviors result in regret, individuals may feel regret due to several reasons after actual purchases (Sweeney et al., 2000). In this context, it is crucial to comprehend the factors leading P-PR to mitigate the regret of individuals. However, in spite of the fact that P-PR has been well-documented in relevant consumer behavior literature, it has been examined by a very few studies from financial standpoint (e.g., Pun et al., 2021; Ullah and Sepasgozar, 2020). On the other hand, since individuals, who bought foreign currency at higher foreign exchange rate, have experienced regret after a noticeable decrease in foreign exchange rate, P-PR is utilized in this study as an outcome of FMO and UnP.

3.Conceptual Framework and Hypotheses Development

3.1.The Interaction between FMO and UnP

Individuals are in tendency of comparing themselves with others (Festinger, 1954). Accordingly, the more they are comparing themselves with others, the more they feel anxieties which stimulate them to act immediate and unplanned actions. When individuals consider that they miss out any rewarding experience which others are benefiting, they are more likely to figuratively leap on the bandwagon of what others do as a consequence of bandwagon effect (Kang and Ma, 2000). When they feel fear that any delayed behavior can cause a big loss for them, FMO can be strengthened. So, not to feel out of the loop, FMO may stimulate the individuals to take an immediate action (Fox & Moreland, 2015), which in turn leads to unplanned or impulsive buying behavior (Erciş et al., 2021; Li et al., 2020).

Previous research on FMO have also empirically revealed that FMO triggers individuals' irrational behaviors due to the desire to be linked with what others do (Baker et al., 2016; Elhai et al., 2016). So, not to miss out any rewarding actions that others do, individuals may take immediate decision and action, which in turn leads to unplanned actions. Punturaumporn (2019) states that individuals have fear of missing out of something great that others are making more money than them. In such context, as others are making more money by buying foreign currencies, individuals experience more FMO, which in turn leads to more UnP. Hence, it is posited that;

H_1: FMO has a significant and positive effect on UnP

3.2.The Interaction between UnP and P-PR

Individuals sometimes carry out unplanned and impulsive purchases (Rook and Fisher, 1995). Accordingly, although they have no intention to buy something else, they buy something (Engel et al., 1982). Since UnP is spontaneous and impulsive behaviors (Saleh, 2012), it leads to greater regret relative to more structured and planned buying behaviors (Shaifali et al., 2021). In extant literature, several research have also documented that there is a direct positive relationship between UnP and P-PR in different contexts (Hoch and Loewentein, 1991; George

and Yaoyuneyong, 2010; Wood, 1998; Saleh, 2012). Drawing upon these previous studies, it can be reasonably assumed that UnP may result in P-PR with respect to foreign currency buying behavior, as well. Accordingly, it is posited that;

H_2: UnP has a significant and positive effect on P-PR.

3.3.The Interaction between FMO and P-PR

FMO paves the way for problems in cognitive health of individuals (Reer et al., 2019). Especially the more the individuals are triggered by more FMO, the more the drive to be connected with what others do results in problems in mental health (Baker et al., 2016). In this context, P-PR is one of the outcomes of FMO because when behaviors driven by FMO increase, individuals become more dissatisfied from the outcome of the behavior (Hill, 2012). So, when individuals triggered by FMO think that others are doing more rewarding things, they are more likely to feel that they are doing wrong (Jacobsen, 2021). Accordingly, they are more likely to take a quick action, which in turn leads to P-PR. In relevant literature, the research has presented that FMO leads to P-PR (e.g., Good and Hyman, 2021). In this context, it can be inferred that foreign currency buying behavior of individuals driven by FMO leads to P-PR. Hence, it is posited that;

H_3: FMO has a significant and positive effect on P-PR.

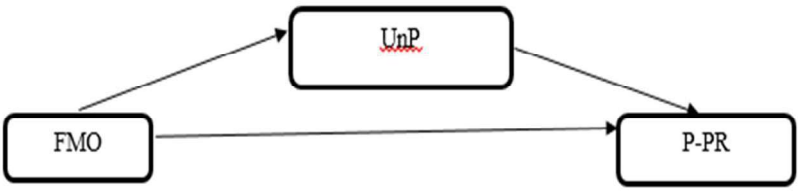
3.4.The Mediating Role of UnP on The Linkage between FMO and P-PR

FMO particularly occurs when individuals think that they fall behind the rewarding experiences of other people (Przybylski et al., 2013). Accordingly, FMO stimulates individuals to observe others' actions and follow them by taking immediate action to mitigate their fear (Baker et al., 2016). On the other hand, UnP is spontaneous and impulsive buying behavior that can be triggered by some factors like FMO (Elhai et al., 2016). In this context, both FMO and UnP may lead to negative post-purchase behavior like regret. Beyond, several studies suggested that unplanned impulsive buying behavior is regarded as a mediating variable (e.g., Lahath et al., 2021; Shaifali et al., 2021). Accordingly, it can be readily inferred that when UnP enters into the link between FMO and P-PR, the impact of FMO on P-PR can either partially be reduced or entirely finished. Drawing upon the foregoing discussion, it can be presumed that UnP has a mediating impact on the interaction between FMO and P-PR within the context of purchase of foreign currency. Hence, it is posited that;

H_4: UnP mediates the relationship between FMO and P-PR.

Drawing upon the foregoing discussion given above, the conceptual model designed for the study is depicted in Figure 1. Based on the model, FMO is determined as the antecedent of P-PR and UnP is set to mediate the link between FMO and P-PR.

Figure 1: Conceptual Model of the Research



4.Methodology

4.1. Data Collection Process and Sampling Procedure

The Ethics Committee Permission for this study has been obtained from the Ethics Committee of the University of Afyon Kocatepe with decision no: 2022/19 on the date of 14.01.2022.

In attempt to analyze the linkage between FMO, UnP and P-PR of individuals towards foreign currency purchase, this study is conducted as a cross-sectional study. Self-administered questionnaire is selected as the most appropriate method for data collection. In this context, questionnaire prepared for this study sent to each participant who has purchased foreign currency in last six months and they are asked to respond every item in the questionnaire. To give the last form of the questionnaire, it is performed a pilot study with 40 participants to check whether all items taking place in questionnaire form are clearly comprehended by participants, and provide that whether both face and content validity are established. Drawing upon the feedbacks regarding pilot study, the questionnaire is revised to take its final form.

The data collection process has been started on 17.01.2022 and it has continued to 04.02.2022. Since this study is based on survey, and the data collection is done after 2020, ethic committee approval has been obtained from the Ethics Committee of the University of Afyon Kocatepe with a decision on the date of 14.01.2022. Throughout the time of data collection, a total of 409 respondents are reached by employing convenience sampling method. On the other hand, 17 of all questionnaires are eliminated from the data analysis because participants stated that they have never bought foreign currency in their life. So, a total of 392 questionnaires are deemed as valid to be used in data analysis.

4.2. Instrument Design

To analyze the suggested relationship between the variables of the study, a structured questionnaire, which have four parts including demographics, FMO, UnP and P-PR, is developed. Since the study attempts to examine the interaction between FMO, UnP and P-PR

towards foreign currency purchase, participants are initially asked that whether they have ever purchased any foreign currency in last six months. If they give "yes" answer, then they are asked to answer the other questions in the questionnaire form.

The questionnaire distributed to participants is prepared based upon relevant literature. Accordingly, all scales employed in the study are borrowed from prevailing scales but they are adapted to the study. Hence, FMO scale including eight items is adapted from Good and Hyman (2020), while UnP scale with nine items is adapted from Lin and Lin (2005). Finally, four items from Bui et al., (2011) are employed and modified to the study to measure P-PR towards foreign currency purchase.

A five-point type Likert type scale which is anchored from ''1 = strongly disagree'' to ''5 = strongly agree'' is adopted to measure all items in the questionnaire. Since the original language of these scales is English, all of the items in the questionnaire are translated into Turkish by adopting backtranslation method.

5.Findings

5.1. Sample Demographics

Both frequencies and percentage of sample characteristics are given in Table 1. In terms of gender, 53.83 percent of the total sample is male, while 46.17 percent of them is female. With respect to age distribution, 28.06 percent, 25.26 percent and 24.74 percent of the total sample range between 36-45 years old, 46-55 years old and 26-35 years old, respectively. On the other hand, 8.67 percent, 8.42 percent and 4.85 percent of the total sample are in age between 56-65 years old, 18-25 years old and 66 years old and older, respectively. As respect to monthly household income distribution, sample characteristics present that 23.72 percent and 22.45 percent of the total sample have income varying between 5001 TL and 7500 TL and 75001 TL and 10000 TL, respectively; while 22.20 percent, 18.62 percent and 13.01 percent having monthly income between 10001 TL and over, 2501 TL-5000 TL and 2500 TL and lower, respectively. The education level profile of the sample indicates that 42.09 percent and 33.93 percent of the total sample have bachelor's degree and postgraduate degree, respectively, while 23.98 percent of them having high school degree. With respect to occupation, 33.42 percent and 31.63 percent of the sample are working in a public and private sector, respectively; whereas 21.94 percent of them of them are self-employed, and rest of them select other. Finally, marital status profile of the total sample shows that 36.22 percent and 29.85 percent of the sample are married with children and married without children, respectively, while 23.47 percent of them are single and 10.46 percent of them select other.

Table 1: Sample Characteristics

	Frequency	Percentage		Frequency	Percentage
Gender			Education		
Female	181	46.17	High school	94	23.98
Male	211	53.83	Bachelor's degree	165	42.09
Total	392	100	Postgraduate	133	33.93
			Total	392	100
Age			Household Income		
18–25	33	8.42	2500 TL and lower	51	13.01
26–35	97	24.74	2501 TL-5000 TL	73	18.62
36–45	110	28.06	5001 TL-7500 TL	93	23.72
46–55	99	25.26	7501 TL-10000 TL	88	22.45
56-65	34	8.67	10001 TL and over	87	22.20
66 and older	19	4.85	Total	392	100
Total	392	100			
Occupation			Marital Status		
Government employee	131	33.42	Single	92	23.47
Private firm employee	124	31.63	Married without	117	29.85
Self-employed	86	21.94	children		
Other	51	13.01	Married with children	142	36.22
Total	392	100	Other	41	10.46
			Total	392	100

5.2.Measurement Model

5.2.1.Exploratory Factor Analysis

Concerning the evaluation of suggested relationship between the constructs for 21 items, it is crucial to check construct validity. To perform construct validity, principal component analysis is utilized with varimax rotations. Next, Kaiser-Meyer-Olkin (KMO) and Bartlett's tests are carried out for each scale utilized in the present research, as well to control whether the compiled data has an enough sampling adequacy to perform factor analysis (See Table 2). Beyond, to control that any item is not good enough to load on a single factor at 0.50 or less, the factor structures of the constructs are calculated (Hair et al., 2013).

Table 2: Measurement Tools Results

	FMO	UnP	P-PR
KMO Measure	0.944	0.961	0.864
Bartlett's Test	χ^2 = 5156.688 df: 28 *p*: 0.000	χ^2 = 3998.902 df: 36 *p*: 0.000	χ^2 = 1594.353 df: 6 *p*: 0.000
Number of Factors	1	1	1
Total Variance Explained	7.128	7.179	3.486
% of variance explained	89.096	79.769	87.156

Table 2 indicates that KMO measure for FMO, UnP and P-PR factors are 0.944, 0.961 and 0.864, respectively. As respects to Table 2, Bartlett's Test is found significant for FMO (χ^2 = 5156.688, $p < 0.05$), for UnP (χ^2 = 3998.902, $p < 0.05$) and for P-PR (χ^2 = 1594.353, $p < 0.05$), as well. For FMO, one factor is extracted with the eigenvalue of 7.128 which is above 1, and 89.096 percent of the variance is explained, while for UnP, one factor is also extracted with eigenvalue of 7.179 which is above 1, and 79.769 percent of the variance is explained. Finally, for P-PR, one factor is extracted with eigenvalue of 3.486 which is larger than 1, and 87.156 percent of the variance is explained. Rotation is not deemed as necessary because there is only

one factor extracted for each construct. Accordingly, for all of the constructs, a single factor is used in data analysis.

Referring to the findings of KMO measures and Bartlett's tests, exploratory factor analysis (EFA) can be conducted with whole items (See Table 3). The test value of KMO measure is found 0.972. Since the test value of KMO is above 0.90, this value ensures that the data structure regarding the study is good enough for factor analysis for sampling adequacy (Şencan, 2005). Bartlett's test value is found significant (χ^2 = 11858. 096, $p < 0.05$), as well. Then, factors are reduced with principal component analysis by utilizing varimax rotation. As respects to Table 3, none of the 21 items are excluded from analysis, because all of the factor loadings are over 0.50 (Costa-Font and Gil, 2009). Overall, 3 factors and 21 items, which have eigenvalue above 1, and explain 85.053 percent of the total variance, are found.

Table 3: Factor Loadings

Measure	Loading
FMO	
FMO1: I'm afraid later I will feel sorry if I didn't buy foreign currency while others are buying	0.811
FMO2: I will worry about what I'm missing while others are buying foreign currency	0.820
FMO3: I will worry others are doing more rewarding things than me while they are buying foreign currency	0.816
FMO4: I will feel concerned that others are buying more foreign currency without me.	0.801
FMO5: I will feel left out, while others are buying foreign currency	0.829
FMO6: I will feel sorry that I didn't buy foreign currency what others buy.	0.822
FMO7: I will feel anxious about not buying foreign currency what others buy	0.813
FMO8: I will feel bothered that I missed an opportunity to buy foreign currency that others buy.	0.794
UnP	
UnP1: I often buy foreign currency spontaneously.	0.781
UnP2: "Just do it" describes the way I buy foreign currency.	0.775
UnP3: I often buy foreign currency without thinking.	0.824
UnP4: "I see foreign currency and I buy foreign currency" describes me.	0.759
UnP5: "Buy foreign currency now, think about it later" describes me.	0.752
UnP6: Sometimes I feel like buying foreign currency on the spur of the moment.	0.727
UnP7: I buy foreign currency according to how I feel at the moment.	0.734
UnP8: I carefully plan most of my foreign currency purchases (reverse coded).	0.767
UnP9: Sometimes I am a bit reckless about when I buy foreign currency.	0.665
P-PR	
P-PR1: I often feel anxiety after buying foreign currency I have not planned before.	0.737
P-PR2: I often feel that my not unplanned foreign currency purchases have little benefits.	0.777
P-PR3: I often try to convince myself that the foreign currency I have bought impulsively may benefit later on.	0.666
P-PR4: My planned foreign currency purchases make me more satisfied than unplanned purchases	0.691
KMO Measure: 0.972 Bartlett's Test: 11858.096 df: 210 p: 0.000 Number of factors: 3 Number of items: 21 Total variance explained: 85.053 %	

5.2.2 Confirmatory Factor Analysis

After performing EFA, all of the items within the questionnaire are subjected to confirmatory factor analysis (CFA), as well. Accordingly, the goodness of fit indices demonstrating the fit between factor structure and data are initially controlled (Hair et al., 2013).

The model fit indices (i.e., $\chi^2(181_{df}) = 512.20$ (p=0.000), GFI = 0.90, AGFI = 0.86, NFI = 0.99, NNFI = 0.99, IFI = 0.99, RFI= 0.99, CFI = 0.99, RMSEA = 0.068, RMR = 0.041, SRMR = 0.024) signify that there is good fit between factor structure and data (Tabachnick and Fidell, 2013).

As regards to CFA results, standardized factor loadings between observed and latent variable range from 0.80 to 0.95 (See Table 4). In addition, since each observed item is greater than the value of 0.50, they are welcomed as statistically significant ($p \leq 0.05$) (Hair et al., 2013). Besides, all t-values vary between 20.57 and 25.10 and these values ensure that all the links between observed and latent variables are statistically significant at the 0.05 level ($t > 1.96$). Hence, it is re-proved that none of the 21 items are eliminated from the study. Beyond, convergent validity is also ensured, because entire standardized factor loadings are greater than 0.5 and all t-values are higher than 3.0 (Hair et al., 2013).

Table 4: Construct Measurement Summary

Constructs	Items	Standardized Loadings	t-value	α	CR	AVE	Mean score	Item mean score	Item SD
Fear of Missing Out (FoMO)	FMO1	0.94	*	0.982	0.94	0.66	2.6712	2.648	1.3677
	FMO2	0.92	23.85					2.656	1.3134
	FMO3	0.92	23.98					2.913	1.4025
	FMO4	0.94	24.93					2.462	1.2728
	FMO5	0.95	25.10					2.564	1.3307
	FMO6	0.94	24.71					2.778	1.3865
	FMO7	0.94	24.81					2.584	1.2746
	FMO8	0.91	23.55					2.765	1.3817
Unplanned Buying Behavior	UnP1	0.85	*	0.968	0.92	0.57	2.5762	2.648	1.2236
	UnP2	0.89	22.58					2.500	1.2490
	UnP3	0.90	23.00					2.367	1.2170
	UnP4	0.86	21.33					2.763	1.2541
	UnP5	0.89	22.69					2.541	1.3431
	UnP6	0.84	20.57					2.495	1.2387
	UnP7	0.89	22.33					2.536	1.3046
	UnP8	0.89	22.31					2.668	1.2942
	UnP9	0.88	22.20					2.668	1.3254
Post-Purchase Regret	P-PR1	0.91	*	0.951	0.81	0.52	2.8361	2.763	1.2843
	PP-R2	0.90	22.78					2.783	1.2496
	P-PR3	0.94	24.54					2.816	1.3195
	P-PR4	0.80	22.51					2.982	1.3138

*Item fixed to set the scale
Fit statistics: $\chi^2(181_{df}) = 512.20$ (p=0.000), GFI = 0.90, AGFI = 0.86, NFI = 0.99, NNFI = 0.99, IFI = 0.99,
RFI=0.99, CFI = 0.99, RMSEA = 0.068, RMR = 0.041, SRMR = 0.024).
CR = composite reliability, AVE = average variance extracted, SD = standard deviation

As respects to Table 4, all constructs are deemed to have acceptable reliability because all Cronbach alpha values varying between 0.951 and 0.982 are greater than threshold value of 0.70 (Nunnally, 1978). Moreover, Cronbach alpha value of the scale is found 0.986, which is greater than 0.70. So, it is confirmed that the model is reliable. Beyond, composite reliabilities (CR) varying from 0.81 to 0.94 presents a good construct reliability because CR values greater than 0.70 are welcomed as good construct reliability (Fornell and Larcker 1981). Also, convergent validity is ensured because each average variance extracted (AVE) value varying between 0.52 and 0.66 is greater than 0.50 (Bagozzi & Yi, 1988) and all CR values are more than AVE values (Anderson & Gerbing, 1988). To say that the scales are valid, it is crucial to check divergent validity. For checking divergent validity, the square root of the AVE values for latent variables are calculated and compared with correlations between latent variables (See

Table 5). The square root of AVE value for FMO, UnP and P-PR is calculated 0.81240, 0.75498, 0.72111, respectively. The correlation coefficient between FMO and UnP, UnP and P-PR, and FMO and P-PR is 0.7196, 0.5563 and 0.3649, respectively. Overall, divergent validity is also established because the square root of AVE values of each latent variable is above the correlation coefficient between the latent and other latent variables in the model (See Table 5).

Table 5: Divergent Validity Check

Latent Variables	FMO	UnP	P-PR
FMO	*0.81240		
UnP	0.7196	*0.75498	
P-PR	0.3649	0.5563	*0.72111

* The values given in the diagonal part of the table are square root values of AVE

5.2.3. Common Method Variance

It is also required to evaluate common method bias by employing Harman's single-factor test (Podsakoff & Organ, 1986). To check it, all items are loaded on one factor and CFA is repeated (Podsakoff et al., 2003). The result of Harman's single factor test indicates that there is not a good fit between the data and the model (χ2(189df) = 5723.04 (p=0.000), GFI = 0.42, AGFI = 0.29, RMSEA = 0.27, RMR = 0.12). Beyond, the total variance extracted by one factor is calculated 47.928 % which is lesser than the threshold value of 50 %. Thus, it is inferred that common method bias does not cause problem for this study.

5.3. Structural Model

In attempt to check the hypotheses established in suggested model, structural equation modeling (SEM) is employed in this study. Before conducting structural model analysis, assumptions for SEM (i.e., normality, sampling adequacy, linearity, and multicollinearity) are initially controlled and verified (Hair et al., 2013). In first place, the model fit index (i.e., ($\chi^2(181_{df})$ = 520.79 ((p= 0.000), GFI = 0.90, AGFI = 0.86, NFI = 0.99, NNFI = 0.99, IFI = 0.99, CFI= 0.99, RMSEA = 0.069, RMR = 0.040, SRMR = 0.024) reveals a good fit between structural model and data (Tabachnick and Fidell, 2013). In accordance with H_1, the linkage between FMO and UnP is found as statistically significant and positive ($\beta = 0.82$, $t = 16.63$, $p < 0.05$) and so H_1 is supported. As proposed in H_2, UnP has a significant and positive effect on P-PR ($\beta = 0.58$, $t = 11.00$, $p < 0.05$), and so H_2 is supported. In line with H_3, FMO positively and significantly affects P-PR ($\beta = 0.83$, $t = 18.23$, $p < 0.05$) and accordingly, H_3 is supported. Finally, for H_4, four conditions suggested by Baron and Kenny (1986) are traced to examine the mediating role of UnP on the relationship between FMO and P-PR. The conditions suggested by Baron and Kenny (1986) are: there is a significant link (i) between FMO and P-PR ($\beta = 0.83$, $p < 0.05$); (ii) between FMO and UnP ($\beta = 0.82$, $p < 0.05$); and (iii) between UnP and P-PR ($\beta = 0.58$, $p < 0.05$); and (iv) when testing the mediating role of UnP statistically, the significant relationship existing between FMO and P-PR as seen in the prior condition ($\beta = 0.83$) has been considerably decreased ($\beta = 0.35$, $t = 7.09$, $p < 0.05$) (See Figure 2). As respects to mediation analysis result, we conclude that there is a partial mediation role of UnP on the relationship between FMO and P-PR. Hence, H_4 is partially supported. Finally, Sobel test is conducted to examine the significance impact of mediation on associated relationships. The results of Sobel test present that mediating impact of UnP on the relationship between FMO and P-PR is statistically significant (Sobel z-value = 9.1589, $p < 0.05$). Overall, all of the hypotheses established for this study are supported (See Table 6).

Figure 2: Conceptual Model of the Research

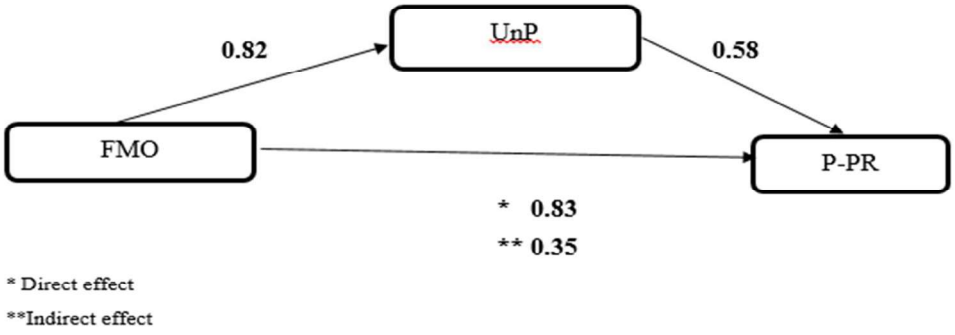


Table 6: SEM Results of the Hypotheses

Hypotheses	Standardized parameter estimates	t-value	p-value	Hypothesis status
H_1: FMO ⟶ UnP	0.82	16.63	<0.05	Verified
H_2: UnP ⟶ P-PR	0.58	11.00	<0.05	Verified
H_3: FMO ⟶ P-PR	0.83	18.23	<0.05	Verified
H_4: FMO ⟶ UnP ⟶ P-PR	0.35	7.09	< 0.05	Partially Verified

Fit statistics: ($\chi^2(181_{df})$ = 520.79 ((p= 0.000), GFI = 0.90, AGFI = 0.86, NFI = 0.99, NNFI = 0.99, IFI = 0.99, CFI= 0.99, RMSEA = 0.069, RMR = 0.040, SRMR = 0.024).

6. Conclusion and Recommendations

Currently, an economic program is being carried out in our country, which is based on keeping interest rates low, thus aiming to increase investment and growth. Besides, this economic program aims to decrease in imports and increase in exports with a more competitive exchange rate, thus reducing the current account deficit and even turning it into a positive one. According to the most recently announced data, the negative difference between the inflation rate and the applied interest has increased up to 40%. This situation caused the Turkish Lira and instruments based on TL to lose their attractiveness. Though the economy management tries to reduce the pressure on the exchange rates through the currency protected deposit system, this negative real return on TL assets creates a significant pressure on the exchange rates. The upward pressure on commodity prices caused by the recent developments in Russia and Ukraine will have a negatively unexpected impact on inflation. Beyond, the potential expected loss in tourism revenues will have a negatively unexpected impact on the current account deficit. As it is known, although foreign currencies are not accepted as an investment tool, especially the money that has the nature of reserve money gains the qualification of an investment and storage tool in economies, where inflation pressure is present. As a result, it would not be wrong to expect that domestic residents' interest in foreign currencies will continue to increase, assuming that domestic inflation pressures will continue, and the risk posed by foreign risks in financial markets is taken into account.

In last six months in Turkey, due to a dramatic increase in the value of foreign currencies against Turkish liras, many individuals bought foreign currencies to protect the value of their money. As well as the increase in foreign exchange rate, the posts shared in social media as regards to buying foreign currency and the interaction among individuals also trigger them to buy foreign currency. Accordingly, due fear that others are making more money than themselves, many individuals have bought foreign currencies such as euro and dollar. Nevertheless, although many individuals have bought these foreign currencies, they have experienced regret after a considerable decrease in value of foreign currencies against Turkish liras. In this context, in an attempt to shed a light on understanding individuals' foreign currency buying behavior in last six months, this study explores the relationship between FMO, UnP and P-PR.

The results of the study present that FMO as regards to buying foreign currencies triggers both UnP and P-PR of individuals regarding foreign currency purchase. In this context, the findings of the study strengthen the findings of previous studies which have affirmed that FMO triggers irrational behavior of individuals (e.g., Baker et al., 2016; Elhai et al., 2016) and negative post-purchase behaviors (e.g., Good and Hyman, 2021; Hill, 2012). The findings of the study also report that UnP leads to P-PR within the context of foreign currency buying behaviors. Accordingly, the findings of the study also confirm the findings of previous studies which have showed that UnP results in P-PR (e.g., Saleh, 2012). Besides, the findings of the study reveal a partial mediation impact of UnP on the link between FMO and P-PR. Based on these results, this study ensures fruitful contributions to extant literature as follows.

First, in spite of the fact that FMO, UnP and P-PR have been explored by various studies with respect to different product categories and different behavior contexts (e.g., Baker et al., 2016; Elhai et al., 2016, Przybylski et al., 2013; Saleh, 2012), it is the first time that these constructs have been examined from the financial behavior standpoint. Accordingly, FMO, UnP and P-PR constructs are incorporated by this study to establish a framework to explain foreign currency buying behavior of individuals. Second, this study extends the previous research on FMO, UnP and P-PR by testing the associated relationships between the variables in the suggested model with respect to foreign currency buying behavior. So, the results of the study ensure valuable contributions to relevant literature. Third, this study shows that the relationship between FMO and P-PR is partially mediated by UnP. Hence, the findings of the study reveal that the effect of FMO on P-PR diminishes, when UnP is introduced in the model. Thus, this research is also the first research which examines the mediating role of UnP in financial behavior context. Overall, the findings of the study contribute to existent literature and pave the way for future research to explain financial decisions and actions of individuals.

The findings of the study also provide applicable insights by ensuring practical contributions to individuals and investors as follows. Initially, the results of the study present that FMO and UnP lead to P-PR for individuals during financial uncertainties. Accordingly, particularly in uncertain conditions, it is crucial to be calm before taking actions and away from irrational behaviors. Moreover, not to feel regret after buying foreign currency, individuals should learn from their past mistakes and regrets and realize their future foreign exchange buying behavior in a more planned way. Second, social media posts increase interactions and comparisons, which in turn leads to FMO. Hence individuals should also be careful while they are sharing posts about their opinions and actions and they should not feed the fear of others by displaying their opinions and actions. Finally, since individuals are often affected by posts, news and conversations in social media regarding expectancy towards increase in foreign exchange rates, policy makers could prohibit sharing of the fake posts and news about value increase in foreign exchange rate that trigger fear of individuals, which potentially results in irrational and unplanned individual behaviors.

This study has also various limitations in several aspects. First, this study is designed as quantitative research and data are obtained by using survey method. To shed a light on understanding other drivers behind foreign currency buying behavior of individuals, qualitative data collection methods such as in-depth interviews can also be utilized in further research. Second, this study is limited to FMO, UnP and P-PR constructs to explain the foreign currency buying behavior of individuals in last six months. To address this gap, the conceptual model proposed by this study can be extended by further research to comprehensively understand the key psychological and economical drivers behind this behavior. Finally, the study is carried out with 392 participants who have bought foreign currency in last six months. However, it is required to use bigger sample size for generalizing the results of the study to entire population.

References

Aiba, D., Odajima, K., & Khou, V. (2018), Foreign currency borrowing and risk-hedging behavior: Evidence from Cambodian households, *Journal of Asian Economics*, *58*, 19-35.

Amiry, S., Mosadegh, M. J., & Sanaei, M. R. (2017), The unplanned online buying behavior in social commerce: The role of users' pseudo-social interactions (case: users of Instagram network), *Journal of Business Management*, *9*(3), 463-484.

Anderson, J., & Gerbing, D. (1988), Structural equation modelling in practice: A review and recommended two-step approach, *Psychological Bulletin*, 103(3), 411–423.

Argan, M. & Argan, M. T. (2019), Toward a New Understanding of Fomo: 'Fomsumerism', *Journal of Theory and Practice in Marketing*, 5(2), 277-302.

Bagozzi, R. P., & Yi, Y. (1988), On the evaluation of structural equation models, *Journal of the Academy of Marketing Science*, 16(1), 74–94.

Baker, Z. G., Krieger, H., & LeRoy, A. S. (2016), Fear of missing out: Relationships with depression, mindfulness, and physical symptoms, *Translational Issues in Psychological Science*, 2(3), 275-282.

Bakri, M. H., Azman, H., & Dabas, N. (2021), Factor Affects Customer Behavior During Currency Depreciation In Johor Bahru, *The Journal of Technology Management and Technopreneurship (JTMT)*, 9(1), 48-55.

Baron, R.M. & Kenny, D.A. (1986), The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations, *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

Bui, M., Krishen, A. S., & Bates, K. (2011), Modeling regret effects on consumer post-purchase decisions, *European Journal of Marketing*, 45(7/8), 1068-1090.

Cheng, Y. H., Chuang, S. C., Huang, M. C. J., & Weng, S. T. (2021), What Triggers Travel Spending? The Impact of Prior Spending on Additional Unplanned Purchases, *Journal of Travel Research*, 00472875211030337.

Cobb, C. J., & Hoyer, W. D. (1986), Planned versus impulse purchase behavior, *Journal of retailing*, 62(4), 384-409.

Costa-Font, M. & Gil, J. M. (2009), Structural equation modelling of consumer acceptance of genetically modified (GM) food in the Mediterranean Europe: A cross country study, *Food Quality and Preference*, 20(6), 399–409.

Dodgson, L. (2020), *A human behavior expert explains 4 psychological reasons why people are panic buying items in bulk during the coronavirus pandemic*. Retrieved from https:// www.insider.com/why-people-are-panic-bulk-buying-during-the-coronaviruspandemic-2020-3. (Accessed: 01.02.2022).

Elhai, J. D., Levine, J. C., Dvorak, R. D., & Hall, B. J. (2016), Fear of missing out, need for touch, anxiety and depression are related to problematic smartphone use, *Computers in Human Behavior*, 63, 509-516.

Engel, J. F., Blackwell, R. D., & Kollat, D. T. (1982), *Consumer behavior* (3rd ed.), Hinsdale, IL: Dryden Press.

Erciş, A., Deligoz, K., & Mutlu, M. (2021), Öğrencilerin FOMO ve Plansız Satın Alma Davranışları Üzerine Bir Uygulama, *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 35(1), 219-243.

Festinger L. (1954), A theory of social comparison processes, *Human Relations,* 7(2), 117-140.

Fornell, C. & Larcker, D.F. (1981), Evaluating Structural Equation models with unobservable variables and measurement error, *Journal of Marketing Research*, 18(2): 39-50.

Fox, J., & Moreland, J. J. (2015), The dark side of social networking sites: An exploration of the relational and psychological stressors associated with Facebook use and affordances, *Computers in human behavior*, 45, 168-176.

George, B. P., & Yaoyuneyong, G. (2010), Impulse buying and cognitive dissonance: a study conducted among the spring break student shoppers, *Young Consumers*, 11(4), 291-306.

Gibbons, F. X. & Buunk, B.P. (1999), Individual differences in social comparison: development of a scale of social comparison orientation, *Journal of Personality and Social Psychology*,76(1), 129–142.

Good, M. C., & Hyman, M. R. (2020), 'Fear of missing out': antecedents and influence on purchase likelihood, *Journal of Marketing Theory and Practice*, 28(3), 330-341.

Good, M. C., & Hyman, M. R. (2021), Direct and indirect effects of fear-of-missing-out appeals on purchase likelihood, *Journal of Consumer Behaviour*, 20(3), 564-576.

Hair, J. H., Black, W. C., Babin, B. J. & Anderson, R. E. (2013), *Multivariate Data Analysis*. United States of America: Pearson.

Heitmann, M., Lehmann, D. R., & Herrmann, A. (2007), Choice goal attainment and decision and consumption satisfaction, *Journal of marketing research*, 44(2), 234-250.

Hill, R. P., Martin, K. D., & Chaplin, L. N. (2012), A tale of two marketplaces: Consumption restriction, social comparison, and life satisfaction, *Marketing Letters*, 23(3), 731-744.

Hoch, S. J., & Loewenstein, G. F. (1991), Time-inconsistent preferences and consumer self-control, *Journal of Consumer Research*, 17(4), 492-507.

Hwang, Y. H. (2010), A theory of unplanned travel decisions: Implications for modeling on-the-go travelers, *Information Technology & Tourism*, 12(3), 283-296.

Jacobsen, S. (2021), FoMO, JoMO and Covid: How Missing Out and Enjoying Life Are Impacting How We Navigate a Pandemic. In *Marketing Under Uncertainty 2021 Annual Spring Conference* (pp. 46).

Kang, I., Cui, H., & Son, J. (2019), Conformity consumption behavior and FoMO. *Sustainability*, 11(17), 4734.

Kang, I., & Ma, I. (2020), A Study on Bandwagon Consumption Behavior Based on Fear of Missing Out and Product Characteristics, *Sustainability*, 12(6), 2441.

Kirk, C. P., & Rifkin, L. S. (2020), I'll trade you diamonds for toilet paper: Consumer reacting, coping and adapting behaviors in the COVID-19 pandemic, *Journal of Business Research*, 117, 124-131.

Kollat, D. T., & Willett, R. P. (1967), Customer impulse purchasing behavior, *Journal of marketing research*, 4(1), 21-31.

Kwon, H. I., & Trail, G. T. (2010), Winning, Spectator Mood, and Unplanned Buying of Sport-team Licensed Apparel: A Dual Information Processing Perspective, *International Journal of Human Movement Science*, 4(2), 49-64.

Lahath, A., Omar, N. A., Ali, M. H., Tseng, M. L., & Yazid, Z. (2021), Exploring Food Waste during the COVID-19 Pandemic among Malaysian Consumers: The Effect of Social-Media, Neuroticism, and Impulse Buying on Food Waste, *Sustainable Production and Consumption*, *28*, 519-531.

Li, L., Griffiths, M. D., Niu, Z., & Mei, S. (2020), Fear of missing out (FoMO) and gaming disorder among Chinese university students: Impulsivity and game time as mediators, *Issues in Mental Health Nursing*, 41(12), 1104-1113.

Lin, C. H., & Lin, H. M. (2005), An Exploration of Taiwanese Adolescents' Impulsive Buying Tendency. *Adolescence*, 40(157), 215-223.

Nunnally, J.C. (1978), *Psychometric Theory*. New York: McGraw-Hill.

Podsakoff, P.M. & Organ, D.W. (1986), Self-reports in organizational research: Problems and prospects, *Journal of Management*, 12(4), 531-44.

Podsakoff, P.M., Scott, B., MacKenzie, J.Y.L. & Podsakoff, N.P. (2003), Common Method biases in behavioral research: A critical review of the literature and recommended remedies, *Journal of Applied Psychology*, 88(5), 879--903.

Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013), Motivational, emotional, and behavioral correlates of fear of missing out, *Computers in human behavior*, 29(4), 1841-1848.

Pun, H., Swaminathan, J. M., & Hou, P. (2021), Blockchain adoption for combating deceptive counterfeits, *Production and Operations Management*, 30(4), 864-882.

Punturaumporn, B. (2019), Learning from the Past Bubbles and Bursts: Understanding Human Behaviors, Investment Risks and Opportunities for Sustainable Return, *Executive Journal*, 39(2), 108-120.

Reer, F., Tang, W. Y., & Quandt, T. (2019), Psychosocial well-being and social media engagement: The mediating roles of social comparison orientation and fear of missing out, *New Media & Society*, 21(7), 1486-1505.

Rook, D. W. (1987), The buying impulse, *Journal of consumer research*, 14(2), 189-199.

Rook, D. W., & Fisher, R. J. (1995), Trait and normative aspects of impulsive buying behavior, *Journal of Consumer Research*, 22(3), 305-13.

Saleh, M. A. H. (2012), An investigation of the relationship between unplanned buying and post-purchase regret, *International Journal of Marketing Studies*, *4*(4), 106.

Şencan, H. (2005), *Sosyal ve Davranışsal Olcumlerde Guvenirlik ve Gecerlilik (Birinci Baskı).* Ankara: Seçkin Yayınları.

Shaifali, C., Banerjee, R., & Mittal, M. (2021), An Analytical Study on Impulse Buying for Online Shopping During Covid-19, *Journal of Content, Community & Communication*, 12(6), 198-209.

Shankar, A., Cherrier, H., & Canniford, R. (2006), Consumer empowerment: a Foucauldian interpretation, *European Journal of Marketing*, 40(9), 1013-1030.

Sweeney, J. C., Hausknecht, D., & Soutar, G. N. (2000), Cognitive dissonance after purchase: A multidimensional scale, *Psychology & Marketing*, 17(5), 369-385.

Tabachnick, B.G. & Fidell, L.S. (2013), *Using Multivariate Statistics*. Boston: Pearson Education.

Thomas, A., & Garland, R. (1996), Susceptibility to goods on promotion in supermarkets, *Journal of Retailing and Consumer Services*, 3(4), 233-239.

Ullah, F., & Sepasgozar, S. M. (2020), Key factors influencing purchase or rent decisions in smart real estate investments: A system dynamics approach using online forum thread data, *Sustainability*, 12(11), 4382.

Weun, S., Jones, M. A., & Beatty, S. E. (1998), Development and validation of the impulse buying tendency scale, *Psychological Reports*, 82(3), 1123-1133.

Wood, M. (1998), Socio-economic status, delay of gratification, and impulse buying, *Journal of Economic Psychology*, 19(3), 295-320.