

Measuring the Impact of Privacy Concerns, Perceived Risk and Trust on the Continuance Intention of Facebook Users by means of PLS-SEM

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Abstract. Facebook became one of the most popular ways of online social interaction. Many social networking sites like Facebook focus on their market, in other words, users. That's why, antecedents of continuance intention of Facebook users should be investigated in order to develop more efficient marketing strategies [1]. According to the literature, privacy concerns, perceived risk and trust are the most important antecedents of continuance intention. The aim of this study is to examine the influence of privacy concerns, perceived risk and trust on the continuance intention of Facebook users in Bursa city of Turkey. Data were collected via an online questionnaire. A total of 241 questionnaires were used for the analysis. According to the results, privacy concerns antecedent was found to have a statistically negative significant impact on trust and positive significant impact on perceived risk. Trust antecedent was also found to have a statistically significant positive impact on continuance intention of Facebook users.

Keywords: Privacy concerns, perceived risk, trust, continuance intention, Facebook, Bursa, Turkey.

1 Introduction

In recent years, social networks especially Facebook attracted a great number of people all over the world [2]. Facebook became one of the most popular ways of online social interaction. Many social networking sites like Facebook focus on their users. The users of social networks are so important for the long-term success of them [3]. That's why antecedents of continuance intention of Facebook users should be investigated in order to develop more efficient marketing strategies [1].

In the literature, there are studies that aim to understand the relations among continuance intention and its antecedents for social media platforms. According to Wang et al. (2016), trust and risk were found to have significant effects on individual behavior toward social media platforms but that trust had a stronger effect [4]. Another study com-

pared two social media platforms (Facebook and LinkedIn) to understand factors affecting users' trust on social media platforms. According to the findings of the study, it was found that users' trust on social media platforms was mainly influenced by effort expectancy, social influence and perceived risk. Besides, it was found that trust had a significant impact on continuance intention [2]. In Tan et al. (2012)'s study, it was aimed to understand the impact of users' privacy concerns on their acceptance of social media platforms [5]. There is also another study that proposed a research model to investigate individuals' social media platform usage facilitators and inhibitors from the perspective of privacy concerns [6]. In addition, there are various researches that aim to understand the antecedents of continuance intention in photo-sharing context [7] [8] [9] [10]. According to the literature, privacy concerns, perceived risk and trust are the most important antecedents of continuance intention. Especially, privacy concerns is a very current topic for the social media market. Thus, it is aimed to examine the influence of privacy concerns, perceived risk and trust on the continuance intention of Facebook users in this study.

2 Methodology

2.1 Research Sample and Method

The research was conducted on Facebook users in Bursa city of Turkey. Data were collected via an online questionnaire. Convenience sampling method was used in the research. Data were collected in the months of June, July and August of 2018. 275 questionnaires were collected from respondents. 34 of them were excluded as they were not complete based on the initial screening. A total of 241 questionnaires were used for the analysis. The antecedents of the model such as privacy concerns, perceived risk, trust, effort expectancy, social influence and continuance intention were measured by the items based on the related literature [2] [3] [11]. Smart PLS 3.0 and IBM SPSS 21.0 were used in order to analyze the data. PLS-SEM was used to test the influence of privacy concerns, perceived risk and trust on the continuance intention of Facebook users.

The popularity of structural equation modeling (SEM) has grown out of the need to test complete theories and concepts. Much of SEM's success can be attributed to the method's ability to evaluate the measurement of latent variables, while also testing relationships between latent variables. Although the initial application of this method embraced a covariance-based approach (CB-SEM), researchers also have the option of choosing the variance-based partial least squares technique (PLS-SEM). While CB-SEM is the more popular method, PLS-SEM has recently received considerable attention in a variety of disciplines including marketing, strategic management, management information systems, operations management, and accounting. Much of the increased usage of PLS-SEM can be credited to the method's ability to handle problematic modeling issues that routinely occur in the social sciences such as unusual data characteristics (e.g. nonnormal data) and highly complex models [12].

2.2 Profile of Respondents

Demographic characteristics of the respondents were given in Table 1. As seen, 110 of the respondents were male and 131 of the respondents were female. Most of the respondents (44.4%) were between 21-30 ages, 34.0% of the respondents were between 31-40 ages and 13.7% of the respondents were between 41-50 ages. Most of the respondents had an undergraduate degree or were more educated (92.6%). Single Facebook users were slightly more than married users. Most of the respondents had a Facebook experience for 4 and more years. 56.4% of the respondents spent 60 minutes or less time on Facebook, while 43.6% spent more than 60 minutes time on Facebook per day.

Table 1. Profile of Respondents.

Demographics	Frequency	%	Demographics	Frequency	%
Gender			Education		
Male	110	45,6	Primary school	3	1,2
Female	131	54,4	High school	15	6,2
Age			Undergraduate	106	44,1
<=20	2	0,8	MSc	97	40,2
21-30	107	44,4	PhD	20	8,3
31-40	82	34,0	Marital Status		
41-50	33	13,7	Single	133	55,2
>50	17	7,1	Married	108	44,8
Facebook experience			Time spent on Facebook per day		
<1 year	5	2,1	60 minutes or less	136	56,4
1-2 years	2	0,8	More than 60 minutes	105	43,6
2-3 years	8	3,3			
3-4 years	9	3,7			
4 years and more	217	90,1			

2.3 Research Model and Hypothesis

The research model is shown in Fig. 1. As it can be seen, the research model includes the variables, which are; “effort expectancy”, “social influence”, “privacy concerns”, “perceived risk” “trust” and “continuance intention” and the relationships among them.

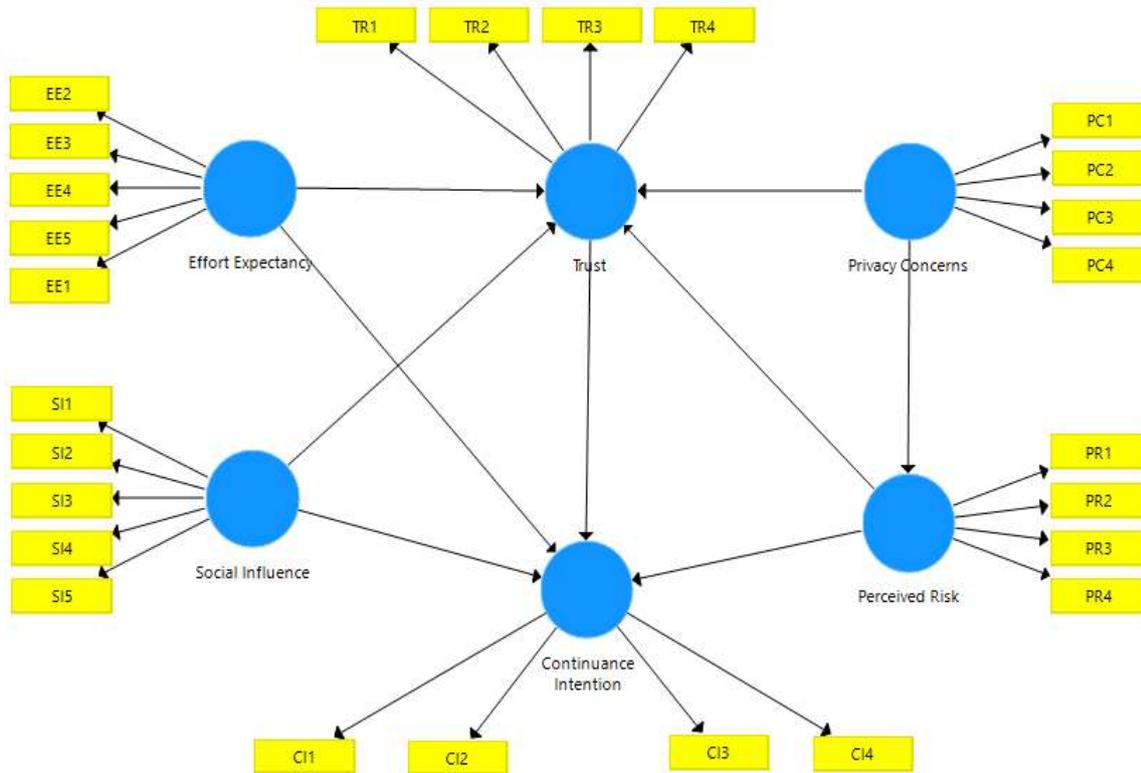


Fig. 1. Research Model

The hypotheses of the research are:

- H₁: “Effort expectancy” positively influences “trust”.
- H₂: “Social influence” positively influences “trust”.
- H₃: “Effort expectancy” positively influences “continuance intention”.
- H₄: “Social influence” positively influences “continuance intention”.
- H₅: “Privacy concerns” negatively influences “trust”.
- H₆: “Perceived risk” negatively influences “trust”.
- H₇: “Perceived risk” negatively influences “continuance intention”.
- H₈: “Privacy concerns” positively influences “perceived risk”.
- H₉: “Trust” positively influences “continuance intention”.

2.4 Construct Reliability and Validity

Table 2 shows the results of construct reliability and validity. The AVE (Average Variance Extracted) values of the structure must be 0,50 or more for the validity of latent structures [13]. Results show that the AVE values for effort expectancy, social influence, trust, continuance intention, privacy concerns and perceived risk are 0.60, 0.55, 0.63, 0.74, 0.76 and 0.56, respectively. As the result of the analysis carried out with Smart PLS and PLS estimation method, the composite reliability value is given. Composite Reliability value should be 0.70 or above [14].

Table 2. Construct Reliability and Validity

Construct	Cronbach's Alpha	Rho'A	CR	AVE
Effort Expectancy	0.84	0.89	0.88	0.60
Social Influence	0.80	0.91	0.85	0.55
Trust	0.80	0.85	0.87	0.63
Continuance Inten- tion	0.88	0.89	0.91	0.74
Privacy Concerns	0.89	0.90	0.92	0.76
Perceived Risk	0.77	0.94	0.83	0.56

2.5 Testing the Research Model by Using PLS

Table 3 shows the results of hypothesis tests and structural relationships. The path coefficient of trust on continuance intention is 0.44, the path coefficient of social influence on trust is 0.41 and the path coefficient of privacy concerns on trust is -0.27. On the other hand, the path coefficients of perceived risk on trust and continuance intention are -0.09 and -0.007, respectively.

Table 3. Results of Hypothesis Tests and Structural Relationships

Hypothesis	Path Coefficient	t-statistic ^a	P Values	Result
H ₁	0.28	2.97***	0.003	Supported
H ₂	0.41	6.02***	0.000	Supported
H ₃	0.35	4.05***	0.000	Supported
H ₄	0.22	2.67***	0.008	Supported
H ₅	-0.27	2.86***	0.004	Supported
H ₆	-0.09	0.65	0.51	Not supported
H ₇	-0.007	0.08	0.93	Not supported
H ₈	0.34	2.17**	0.03	Supported
H ₉	0.44	3.88***	0.000	Supported

According to the results of PLS modeling, all of the hypotheses were supported except hypothesis 6 and 7. Privacy concerns antecedent was found to have a statistically negative significant impact on trust and positive significant impact on perceived risk. Trust antecedent was also found to have a statistically significant positive impact on continuance intention of Facebook users. In addition, effort expectancy and social influence antecedents were found to have significant positive impacts on both trust and continuance intention. As seen from Table 3, the highest path coefficient is 0.44 that belongs to the path of trust-continuance intention. This means that if Facebook wants its users to be loyal then it must build trust. The answer of “how to build trust” question is also

seen from the path coefficients. Facebook must focus on the dimensions of social influence, effort expectancy and privacy concerns in order to build trust, respectively.

3 Conclusion

This study helps draw useful implications for the managers of Facebook and social networking services as well. It is important for practitioners to know the impacts of antecedents on continuance intention to develop more efficient strategies. In this research, both effort expectancy and social influence significantly affected trust antecedent. According to the findings, privacy concerns was found to be one of the important antecedents of continuance intention. Privacy concerns negatively influenced trust antecedent. Besides, trust antecedent was found to have a statistically significant impact on continuance intention of Facebook users. On the other hand, perceived risk was not found to have a significant impact on both trust and continuance intention. According to our findings, effort expectancy and social influence also affected continuance intention significantly. These results implicate that user experience in a social networking service (in this case Facebook) is so crucial. Social networking services should focus on designing positive and unique experiences for users and these experiences should be shared by the users voluntarily. In addition, privacy concerns is very important for Facebook users so that managers of Facebook should be more aware of this finding and develop strategies to be more confidential.

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