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Determinants of Users' Intention to Use Social Media Apps

Sosyal Medya Uygulamalarını Kullanmaya Yönelik Niyetin Belirleyicileri

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Abstract

This study examines to understand the smartphone users' attitudes and intention towards social media apps with the perspective of three widely used models; uses and gratification (U&G) theory's psychological motivations factors (entertainment, sociality, and information), innovation diffusion theory (IDT) and the technology acceptance model (TAM). Thus, in the framework of this research, the proposed research model consists of three respective models. The random sampling technique used to collect research samples from Usak province in Turkey. The data used in testing the research model collected by the questionnaires. The numbers of the valid survey collected were 527. The structural equation modeling conducted to analyze the research assumptions and model. The outcomes indicate that the users' perceived ease of use (PEOU) influenced by complexity, relative advantage, observability, trialability. Perceived usefulness (PU) affected by compatibility, relative advantage, observability, trialability, and PEOU, while with attitude together influencing intention to use social media app. Another outcome showed that attitude determined by sociality, entertainment, PEOU, and PU. Empirical results also provided support for the integrative approach. The results show that TAM in the extension of an innovation diffusion theory and psychological motivations can help decision-makers in the social media app.

Keywords: Uses and Gratification Theory, Innovation Diffusion Theory, Technology Acceptance Model

Paper Type: Research paper

Öz

Bu çalışmanın amacı, akıllı telefon kullanıcılarının sosyal medya uygulamalarına yönelik tutumlarını ve niyetlerini, yaygın olarak kullanılan üç model; kullanımlar ve doyumlar teorisinin psikolojik faktörleri (eğlence, sosyalleşme ve bilgi), yeniliğin yayılımı kuramı ve teknoloji kabul modeli bakış açısıyla incelemektir. Bu araştırma hedefi çerçevesinde, bu üç model bir araştırma modeli altında birleştirilmiştir. Araştırma örnekleri Uşak İl'inden rasgele örneklem tekniği ile elde edilmiştir. Araştırma modelinin test edilmesinde kullanılan veriler anket yolu ile toplanmıştır. Toplanan geçerli anket sayısı 527 dir. Araştırma modeli ile araştırma hipotezleri yapısal eşitlik modellemesi ile test edilmiştir. Sonuçlar göstermektedir ki, kullanıcıların algılanan kullanım kolaylığı; karmaşıklık, bağıl avantaj, gözlemlenebilirlik ve denenebilirlik tarafından etkilenmektedir. Algılanan fayda ise; uygunluk, bağıl avantaj, gözlemlenebilirlik, denenebilirlik ve algılanan kullanım kolaylığı tarafından etkilenirken, algılanan fayda ile tutum sosyal medya uygulaması kullanım niyeti üzerinde etkilidir. Diğer taraftan sosyalleşme, eğlence, algılanan kullanım kolaylığı ve algılanan fayda tutumun belirleyicisidir. Nicel sonuçlar bütünleşik yaklaşımın desteklendiğini göstermiştir. Yeniliğin yayılımı kuramı ve psikolojik motivasyonlar bağlamında teknoloji kabul modelinin sosyal medya uygulamaları karar vericilerine yardımcı olabileceğini göstermektedir.

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Introduction

According to Statista (2018) report by the end of 2018, worldwide smartphone users estimated to be 2.53 billion, the number of active social media users worldwide expected to increase to 3.02 billion by 2021. The ComScore (2018) report reveals that mobile users who are tablet and smartphone users consume more than double time than desktop users on digital platforms. Thus, to be able to construct and maintain a productive mobile ecosystem, it is vital to first understand the users' attitude and intentions towards social media smartphone apps.

Unprecedented improvements are made it possible technology more mobile than ever before in our daily life. These rapid changes made technology more accessible for individuals, respective social groups, and networks. These developments have altered how people live in society, and businesses' the way of work. Therefore, it is getting increasingly vital for marketers, managers, and software developers to understand this change to manage this ecosystem.

With the emerging culture of connectivity, previous traditional marketing tools are not working like it used to do. One-way communication with the customers left its place in a mutual dialogue. This development not only living on a business level but also social activities too. Also, even more than that, contrary to the traditional communication mediums, social media is providing individuals can be able to create and most importantly distribute their contents that could be seen by millions other users that could create a significant impact on society. In our daily lives, we encounter different forms of social media. These social media tools could be gathered under eight subcategories by the objective of usage types, and these are; social networks, social voting and bookmarking sites, blogs, microblogs, media sharing sites, review sites and forums.

Despite the mentioned improvements, there is no standard social media definition in literature. Although there are several definitions of social media particularly in across different disciplines as marketing, information science, public relations, communication science, these are not concise, generally agreed upon and formal definition (Boyd and Ellison, 2007; Carr and Hayes, 2015). One of the earlier definitions of social media proposed by Russo et al. (2008) as, facilitate online communication, collaboration and network, in description of Kaplan and Haenlein (2010), including social media tools, made a similar definition as a group of Internet-based applications that are created ideologically and technologically based on web 2.0 and enabling creating and exchanging user-generated content. The following description of social media is the internet-based channels that allow users in either in real-time or asynchronously, to selectively self-present and interact opportunistically by both wide and narrow audiences who gain value from the perception of interaction with others and user-generated content (Carr and Hayes, 2015).

With the introduction of social media in our daily life, they altered the way we think, communicate, and do work. The consequence of these changes affected the businesses too. Marketers think that social media is a crucial component of the marketing mix and try to find a way to integrate social media into business activities (Chung and Austria, 2010). One study puts forward that 52% of marketers utilizing social media does not have strategy and knowledge of how to employ into the business (Williamson, 2010). It is evident that there is a need for quantitative researches in the social media field (Boyd and Ellison, 2007), Chung and Austria (2010) stated that there is a need for new research on social media usage in marketing practices in order to understand consumer behavior. In this context, this study approaches in multiple

angles to explain users' attitude and intention towards social media app. The objective of this research is to make four contributions to literature. First, in this research, we focused on the application of TAM to understand underlying factors that users' acceptance of smartphone social media applications. Second, in our theoretical model, we accepted IDT's factors as an extrinsic factor and tested these factors that are complexity, trialability, relative advantage, observability, compatibility effect on PEOU, and PU. Third, we tested U&G theory psychological motivation factors which are information, socialization, and entertainment factors effects on users' attitudes in a framework of TAM integrated model. Fourth, we combined all the mentioned model in this research model, tested with structural equation modeling.

1. Literature Review

In literature, there are numerous studies in TAM, IDT, and U&G. We try to examine some of these works in our research purpose framework. Luo (2002) examined the antecedents' role of U&G on attitude toward the web usage and their effect on users' satisfaction, and real web usage in content perspective, Chung and Austria (2010) studied the U&G effect on users' attitude towards marketing messages in social media. The later study examined U&G factors on social media users' word of mouth and their attitudes towards intention (Lien & Cao, 2014). Dolan et al. (2016) examined the effect of U&G factors on users and social media interaction. Basis of U&G theory founded on, individuals seek media among the many others for satisfying their needs, and so that leads gratification (Weaver Lariscy et al., 2011). U&G theory useful and essential approach in explaining the social media users' behavior. (Whiting and Williams, 2013).

TAM try to explain many aspects of users' acceptance of the technology. There are various researches in TAM. Recent researches in the technology usage show that the process of users' acceptance of technological mediums influenced by IDT factors (Rogers, 1983; Lee et al., 2011; Tran and Cheng, 2017). Karahanna et al. (1999) studied the differences between belief and attitudes of individual before and after adoption, in a theoretical research framework that combined IDT and TAM. Peslak et al. (2010) analyzed the effect of gender differences on IDT and noted that gender differences have little effect. As the previous researches, Lee et al. (2011) examined employees' behavioral intention towards e-learning technology by integrating TAM and IDT. By employing IDT, Chang (2010) analyzed the interface of social media's function, Cao and Hong (2011) investigated antecedents and consequences of social media as a teaching tool, and Folorunso et al. (2010) investigated the issues of social networking sites adoption by students. Chang (2010) noted that IDT and provides helpful insights about social media interface. With this perspective, in this research, we propose an integrated research model in exploring factors affecting the users' intention towards using social media apps.

1.1. Technology Acceptance Model

Davis (1989), based on the theory of reasoned action (TRA) proposed TAM. The early research on TRA noted that beliefs, attitude, intention, and behavior have an essential place in a person's actions (Fishbein and Ajzen, 1975). Also, these factors respectively influence each other, and this model has become known as the TRA. The goal of TAM is that offering one general model to understand determinants of technology acceptance of users, and capable of explaining user behavior across the wide variety of technologies and users' population (Davis et al., 1989). The TAM is providing common ground for determination of exogenous factors' effect on internal beliefs, attitudes, and behavioral intention toward using a specific technology.

In the TAM, internal beliefs can explain the following two groups as PU and PEOU. PU is the degree of a person's belief that his or her job performance would enhance by using a specific system. PEOU defined as a person's degree of belief about using a particular system does not require effort. TAM is a general, theoretically and quantitatively accepted model that developed to analyze user acceptance of the technology. As mentioned before, two distinct factors in the model assumed that affect technology acceptance. These are extrinsic and intrinsic motivations/factors. These two factors that affected by external factors, and these are mediating

factors in TAM, so affects all other factors in the model. The theory tries to explain technology usage by using extrinsic and intrinsic motivations. This research aims to examine IDT, and psychological factors affect on user acceptance of smartphone social media app usage in the TAM framework.

1.2. Innovation Diffusion Theory

IDT broadly finds its place application in several disciplines such as technology, medicine, agriculture, communication, marketing, information, education, and so forth. The framework of as a process, the definition of diffusion is in which an innovation communicated over-time via specific channels (Rogers, 2010).

IDT state that respective users based on their beliefs that formed about the innovation decided whether to accept or reject the innovation offer (Agarwal, 2000). Rogers (1983, 2010) has suggested that the decision of innovation adoption or rejection influenced by the social system. The innovation-decisions can be made by the individual and by the entire social system. The innovation-decision made by the entire social system has two subgroups that called collective and authoritative innovation-decision (Rogers, 2010). The innovation-decision about adopting or rejecting an innovation made by an individual independent from other members of the system is called optional innovation-decision. Collective innovation-decision point out that is made by in unity among the members of a system and all the units in the system complies with the decision made by the system. Authority innovation-decisions indicate that adoption or rejection of an innovation that is made by a relatively few individuals in a system who have technical expertise, power, or status. Besides the mainly accepted definition of innovation (Rogers, 1983), there are various other definitions. Freeman (1974) defined innovation as a series of process, and these processes listed as management commercial activities, manufacturing, and technical design, which results in new or improved products. Tidd et al. (1997), including the development of new ideas into marketable products and process, defined innovation as a process. This definition has similarity with Freeman (1974); both of them defined innovation by process perspective. In line with innovation, diffusion examined and described as the process of innovation adoption and gaining acceptance by members of a particular community (Surry & Farquhar, 1997). Rogers (2010) defined diffusion as the process in which the messages that are concerned with new ideas about respective innovation that is communicated through specific channels over time amongst the social system members.

In IDT, the adoption of innovation affected by the five key attributes. These factors listed as relative advantage, complexity, compatibility, observability, and trialability (Rogers, 2010). Relative advantage is an innovation's degree of surpasses current practices (Sonnenwald et al., 2001) or the degree to which perceive the innovation as better than the idea it supersedes (Rogers, 2010). Relative advantage degree measured in economic terms, besides that indicator also convenience, satisfaction, and social prestige factors is essential factors (Rogers, 2010). Complexity is the degree to which perceived difficulty when learning to use and understand a new system or technology. It is evident in this statement that the degree of simplicity of innovation is an indication of how rapidly will adopt than an innovation that requires time that to develop new skill and understanding by individuals (Rogers, 1983). Compatibility defined as the degree to which users' perception about the innovation consistency with the existing values, previous experiences, and needs. In case of when we translated individual as a group in this definition, in perspective of an organization, innovation consistency with organizational needs, goals, structure, and culture is crucial for compatibility (Sonnenwald et al., 2001). Ideas that are compatible with the social system's values and norm rather than ideas that incompatible will be adopted rapidly. Rogers, (2010) stated that since the norms and the values of the social system are one of the crucial factors in the adoption of an idea, the adoption process of incompatible innovations are comparatively slower than compatible ones. Rogers (2010), also proposed that observability definition as the degree to which the outcomes of innovation are apparent to others. Ease of telling others, result demonstrability, consequences, and results of using specific

innovation technology is crucial. Therefore, if the observability degree of results of innovation is high for an individual, then the more likely he or she will adopt (Rogers, 2010). Trialability is the ease of experimenting an innovation, and it includes the degree of risk involved, and the required effort when observing an innovation. Rogers (2010) claims that since it is possible to learn by doing in the trial process, experienceable innovations represent less risk to the individuals who are considering it to adopt. Sonnenwald et al. (2001) defined observability as the degree to which the outcomes of the innovation are easily understood and seen by its respective users.

1.3. Psychological Motivations

In media research, the needs of gratification theory or in the other name referred to as U&G has a unique place. The theory scrutinizes the pleasure that the people search for in a specific media and the people's attitude towards this medium and its contents (Roy, 2009). In a psychological perspective, the U&G theorize that same mass medium can be used for very different purposes by distinct people. The U&G theory's main objective is that to explain the underlying psychological needs that have the effect on the people's use and engage in specific media-use behavior towards gratification of their intrinsic needs (Ko et al., 2005).

U&G theory suggests that media users in their behavior are focused on their goals and, the theory accepts that these individuals as active media users (Katz, 1974). Besides that, individuals aware of their needs, so they select the appropriate media to gratify their needs. Therefore, psychological motivations are crucial to explaining users' behavior. In line with this evaluation, U&G researchers noted that people's attitude significantly influenced by psychological motivations (Kyun Choi et al., 2009; Kim et al., 2011; Chang & Zhu, 2011; Lien & Cao, 2014).

Several researchers examined different aspects of motivations factors of users' social mass media adoption. These motivation factors listed as; Ellison et al. (2006) sociality, information, and entertainment, Jung et al. (2007) sociality, entertainment, conformity, passing time, self-expression, and professional, Krisanic (2008) entertainment, sociality, information, shop, conformity, product inquiry, impression, game and update, Schaefer (2008) sociality, entertainment and information, Baker and White (2010) sociality, passing time, entertainment, collective self-esteem, learning, and social compensation, Brandtzæg and Heim (2009) sociality, information, and entertainment, Kim et al. (2011) sociality information, entertainment, social support and convenience, Chang and Zhu (2011) sociality, conformity, information and entertainment, Lien and Cao (2014) entertainment, sociality and information. These studies generally focused on three factors, which are entertainment, sociality, and information.

2. Research Model and Hypotheses

In our research, we proposed an integrated model that in a framework of TAM (Davis, 1985, 1989; Davis et al., 1989), psychological motivation factors of U&G (Park et al., 2009; Chang & Zhu, 2011; Kietzmann et al., 2011; Kim et al., 2011; Lien & Cao, 2014), and IDT factors. IDT theorized that diffusion of innovation affected by five major factors, and these listed as compatibility relative advantage, complexity, trialability, observability (Rogers, 1983, 2010). In our research, we used these five attributes of IDT as extrinsic motivation and investigated their effect on PEOU and PU. In this study, we treated the same way as in theory and explored factors that are affecting the peoples' attitudes toward this medium and its contents, and we examined information, socialization, and entertainment factors on social media users' attitude and intention.

2.1. Innovation Diffusion Theory

2.1.1. Compatibility

Agarwal and Prasad (1999) stated in their prior study that, similar experiences have the statistically meaningful effect on the individual believes about ease of use, and concluded that have not to affect on the belief about usefulness. Chen et al. (2002) in their study, they examined the compatibility's effect on users' attitudes, Hardgrave et al. (2003) and Wu and Wang (2005) combined the TAM model with the compatibility factor's effect on PU. Lee et al. (2011) and Tran and Cheng (2017) found that while PU has positively influenced by compatibility, compatibility has not statistically significant positive effect on PEOU. In line with prior researches considered, it these research hypotheses proposed below;

H_1: Compatibility has a positive influence on PEOU.

H_2: Compatibility has a positive influence on PU.

2.1.2. Complexity

Hardgrave et al. (2003) have reached the conclusion that PU negatively influenced by complexity directly. Lee et al. (2011) examined the complexity effect on PU and PEOU, and they suggested that while complexity affects PEOU negatively, on PU has a positive effect. Contrary to prior research, Tran and Cheng (2017) conclude that complexity affects PEOU positively and does not affect PU. Therefore, about complexity factor in our research, we proposed two assumptions shown below;

H_3: Complexity has a negative influence on PEOU.

H_4: Complexity has a positive influence on PU.

2.1.3. Relative Advantage

The image accepted as one of the relative advantages, and that proposed by Rogers (1983). One of the essential motivation for almost any individual to adopt an innovation is The desire for gaining social status. As mentioned earlier, Legris et al. (2003) respective to in their study, they asserted that the image's effect on PU. Although, there is limited TAM and IDT research which was examined relative advantage's effect on PEOU and PU, while Lee et al. (2011) suggested that relative advantage has a positive effect both on PU and PEOU. Tran and Cheng (2017) have reached a conclusion that while relative advantage has a positive effect on PU, influence on PEOU did not support. According to preceding studies, the following hypotheses proposed;

H_5: Relative advantage has a positive influence on PEOU.

H_6: Relative advantage has a positive influence on PU.

2.1.4. Observability

According to Karahanna et al. (1999) and Venkatesh and Davis (2000)'s study result demonstrability has an essential role in the users' technology adoption process. Legris et al. (2003) stated that result observability has a positive influence on PU. Demonstrability or in other name observability's effect on PU and PEOU has tested by Lee et al. (2011), and the study showed that observability effect has not supported. In line with the prior study, Tran and Cheng (2017) found that observability affects PEOU, while it does not affect PU. To re-test these assumptions, therefore we proposed hypotheses as;

H_7: Observability has a positive influence on PEOU.

H_8: Observability has a positive influence on PU.

2.1.5. Trialability

The limited research conducted in TAM and IDT perspective to understand the relationship between trialability and PEOU, PU. Lee et al. (2011) suggested that trialability affects both on PEOU and PU. Accordingly, we tested the following hypothesis.

H_9: Trialability has a positive influence on PEOU.

H_{10}: Trialability has a positive influence on PU.

2.2. Psychological Motivations

2.2.1. Information

There is a variety of research which examined information effect on users' attitudes towards using social networking sites. According to Kim et al. (2011)'s study suggests that information one of the useful factor on users social network site use attitude, Chang and Zhu (2011) offer that information factor has the statistically significant influence on the pre and post adopter users' attitude, and there's no statistically significant difference between these two groups. We proposed an assumption shown below;

H_{11}: Information has a positive influence on attitudes.

2.2.2. Sociality

Sociality has been the subject of many types of research, in these studies, researchers examined the sociality's effect on users' attitudes, and they found that attitudes of users have significantly influenced by sociality (Park et al., 2009; Chang & Zhu, 2011; Kim et al., 2011; Lien & Cao, 2014). Considering the researches mentioned above, the research assumptions are;

H_{12}: Sociality has a positive influence on attitudes.

2.2.3. Entertainment

Kim et al. (2011) examined cultural diversity effect on motivation towards social network usage from a psychological perspective, by comparing American and Korean users. The study suggested that while for American users'; convenience, entertainment, and sociality has more influence on attitude. Convenience and sociality have a significant effect on Korean users' attitude. In other research found that entertainment motivation factors have a positive effect on pre-adopters while this result not supported for post-adopters (Chang & Zhu, 2011). Lien and Cao (2014) explored sociality, entertainment, and information factor's effect on users' attitudes, and suggested that entertainment has the second most positive effect on users' attitudes after sociality factor. In the context of prior researches, our proposed assumption shown below;

H_{13}: Entertainment has a positive influence on attitudes.

2.3. Technology Acceptance Model

2.3.1. PEOU

According to one of the first empirical research on the TAM held by Davis (1989), the research outcomes show that PEOU significantly affects PU. Another research state that PEOU has explained the significant amount of variance of PU and both of PEOU and PU has a positive effect on attitudes (Mathieson, 1991; Chen et al., 2002). Taylor and Todd (1995) stated that PEOU has a positive effect on both attitudes and PU. Contrary to the researches mentioned above, Bajaj and Nidumolu (1998) suggested that while PEOU affects attitudes positively, there is no effect on PU. The later study, Hu et al. (1999) stated that PEOU does not affect both PU and attitudes. Accordingly, we tested the following hypotheses;

H_{14}: PEOU has a positive influence on PU.

H_{15}: PEOU has a positive influence on attitudes.

2.3.2. PU

The numerous TAM researchers found that PU has a positive effect on attitudes and behavioral intention (Davis, 1989; Mathieson, 1991; Taylor and Todd, 1995). However, several other researchers have reached the conclusion that PU has no effect on attitudes (Jackson et al., 1997), and while others offer that PU has the reverse effect on attitudes, Bajaj and Nidumolu (1998) and some of the other researchers (Jackson et al., 1997; Lucas and Spitler, 1999) suggested that PU has no effect on intention. Our research assumptions depicted below;

H_{16}: PU has a positive influence on attitudes.

H_{17}: PU has a positive influence on intention.

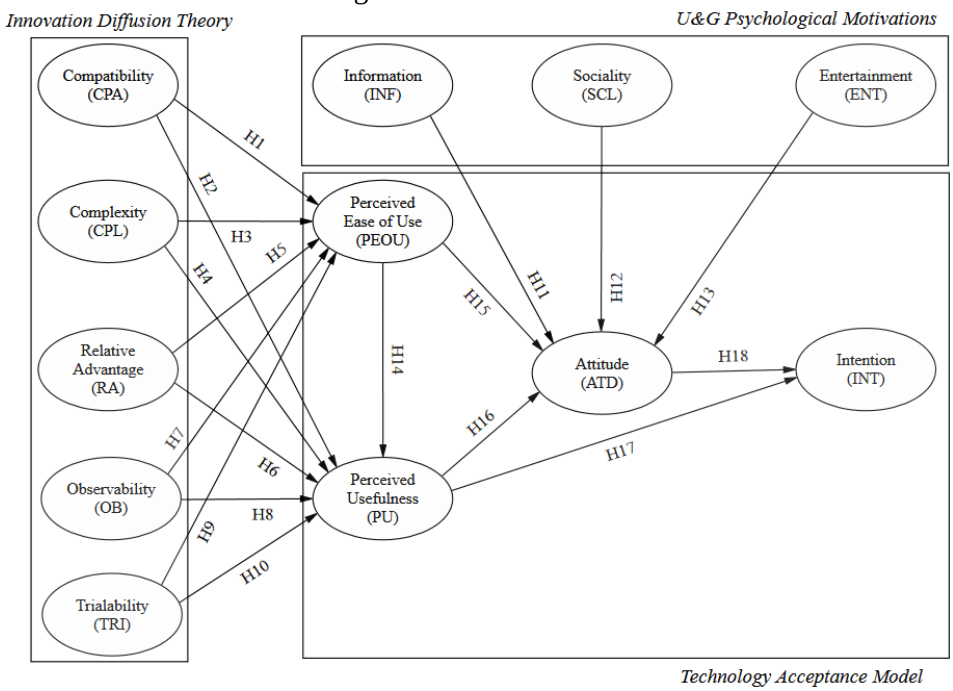
2.3.3. Attitude

TAM theorizes that the intention of users' has affected by their attitudes. In line with this assumption, various studies examined users' attitudes on intentions. While several researchers supported this assumption in their study (Davis, 1989; Mathieson, 1991; Hu et al., 1999; Karahanna et al., 1999), some of the other researchers have not supported (Taylor and Todd, 1995; Jackson et al., 1997). Based on the preceding studies, the hypothesis proposed as;

H_{18}: Attitudes has a positive effect on intention.

Respective to research hypotheses, research model constructed and shown Figure 1.

Figure 1. Research model



3. Research Methodology

3.1. Samples

In order to test our research hypotheses, primary data used that collected via the questionnaire that conducted face to face interview and random data collection technique used. The questionnaire has consisted of 45 items. Addition to that items to measure participants usage habits four items used and to find out about participant's demographic information, four items directed. In order to attain active social media app users, survey participants chosen from

Usak University students and personnel. 527 questionnaire forms collected from participants. The sampling's demographic information depicted in Table 1.

Table 1. Demographic profile

Measure	Items	Frequency	Percent
Gender	Male	275	52,18
	Female	252	47,82
Age	20-24	112	21,25
	25-29	177	33,59
	30-34	86	16,32
	35-39	113	21,44
	40-44	39	7,4
Education	High School	106	20,11
	Two-year college	70	13,28
	Bachelor's	285	54,08
	Graduate	66	12,52
Operating System Used	Android	305	57,87
	IOS	208	39,47
	Windows	14	2,66
Most Used Social Media Tools	Facebook	215	40,8
	YouTube	34	6,45
	Instagram	141	26,76
	Twitter	75	14,23
	Swarm	14	2,66
	WhatsApp	48	9,11
Average daily social media usage	1 hour or less	88	16,7
	2-4 hours	378	71,73
	5-6 hours	52	9,87
	7 hours and more	9	1,71
Average social media experience duration	Less than 1 year	11	2,09
	1-2 years	59	11,2
	3-4 years	101	19,17
	More than 4 years	356	67,55

3.2. Measures

The questionnaire developed from respective prior researches and adapted to suit social media apps. Four items were used to measure relative advantage adapted from (Moore and Benbasat, 1991; Karahanna et al., 1999). Three scale items for Compatibility used from (Moore and Benbasat, 1991; S. Taylor and P. A. Todd, 1995). For measuring trialability, four items used, and these adapted from (Moore and Benbasat, 1991). In measuring observability, three items used (Moore and Benbasat, 1991). In complexity, the scale that consists of four items used (Bradford and Florin, 2003), information, four items adapted from (Ducoffe, 1996; Chang and Zhu, 2011), scale four items used from (Ducoffe, 1996; Chang and Zhu, 2011). Sociality measured by four items adapted from (Chang and Zhu, 2011), for PU measurement, four items adapted from (Davis, 1989). PEOU measured by four scale items modified from different studies (Davis, 1989; Venkatesh and Davis, 2000). From (Chung and Austria, 2010)'s study, four items adapted to measure attitude, and the intention measured by four items (Mathieson, 1991; Pavlou, 2003). In the questionnaire, in measuring to each one of the items, a five-point Likert scale employed that ranges between ''disagree strongly'' (1) to ''agree strongly'' (5). The research model showed in Figure 1.

In order to prevent misleading, the prolonged and repeated wording, and besides for accurate measurement, we conducted the pretest that thirty participants attended. The suggestions from pretest participants have evaluated, and questionnaire constructs formed in the last shape before the main data-gathering stage.

3.3. Results

In this study, structural equation modeling (SEM) conducted to test the research assumptions and theoretical model. In the analyzing process, SPSS 23 and AMOS 23 used. Since the scales used in the data collection tool translated from the original language to Turkish, we need to understand whether the scales are reliable and valid. Before SEM, respectively, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) employed. The scales used in this research evaluated by Kaiser Maier Olkin (KMO) sample adequacy test, Bartlett Sphericity test, and Cronbach alpha values, before performing the EFA and CFA. The results are; KMO 0,882 >0,6 and the Bartlett Sphericity test found statistically significant p-value <0,001, and while found that all Cronbach's alpha values are higher than the threshold value of 0,7 (Peter, 1979; Cronbach and Shavelson, 2004) which indicate that measurement scales have internal consistency. EFA performed and as a result of the EFA, it concluded that it is appropriate to remove four items which were TRI1, INF1, PEOU3, CPL4 from the measurement scales, because of the cross and low factor loadings. At the end of the EFA process, measurement scale items used in the research shown in Table 3.

Table 2. Endogenous and exogenous measurement models fit indices

Fit indices for the measurement model.	Index Value	Endogenous Measurement Model	Exogenous Measurement Model
x^2/d.f (x^2=1144,311, d.f.=773)	1<x<3	1,362	1,43
CFI	>0.95	0,98	0,933
SRMR	<0.08	0,041	0,064
RMSEA	<0.06	0,05	0,055
PClose	>0.05	0,472	0,23

The model fit measures of endogenous and exogenous measurement models were computed with AMOS23 to assess the models' overall goodness fit (x2/df, CFI, SRMR, RMSEA, PClose). The computed values found that were above the recommended respective threshold values (L. t. Hu and Bentler, 1999) showed in Table 2. The computed goodness of fit indices for endogenous and exogenous measurement models showed a good fit with the research data (Hair et al., 2014). The scales were then tested for statistical significance with CFA to determine whether the research data validated the default model (Lomax and Schumacker, 2010). CFA outcomes summarized in Table 3.

Table 3. Confirmatory factor analysis outcomes

Construct and Items	Std. Loading (>0.7)	No. of Items	t-value	SMC (>0.5)	CR (>0.7)	AVE (>0.5)	MSV
Relative Advantage (RA)	,820-,887	4	27,49-31,70	,756-,810	,938	,615	0,408
Compatibility (CPA)	,778-,823	3	26,32-26,37	,684-,897	,898	,606	0,353
Trialability (TRI)	,845-,888	3	20,41-23,30	,547-,682	,909	,602	0,463
Observability (OB)	,790-,842	3	24,46-26,86	,710-,854	,907	,736	0,405
Complexity (CPL)	,826-,849	3	21,26-21,42	,656-,746	,901	,692	0,307
Information (INF)	,764-,835	3	18,31-18,60	,629-,664	,878	,687	0,378
Entertainment (ENT)	,787-,827	4	19,59-20,94	,604-,699	,883	,526	0,316
Sociality (SCL)	,769-,817	4	20,23-21,92	,634-,714	,894	,556	0,303
PU (PU)	,732-,836	4	26,38-27,25	,716-,769	,922	,646	0,483
PEOU (PEOU)	,727-,865	3	28,33-29,47	,784-,802	,936	,602	0,404
Intention (INT)	,843-,912	3	24,91-38,50	,599-,900	,917	,753	0,469
Attitude (ATD)	,760-,818	4	22,65-25,19	,646-,775	,903	,697	0,436

Fornell and Larcker (1981) suggested that the convergent validity assessment process should include standardized CFA loadings, average variance explained, and square multiple correlations (SMC). The standardized CFA loadings of items aligned from 0,727 to 0,92, which were above the suggested value of 0,7. Other CFA outcome result showed that AVE value for 12 scales was above the suggested threshold of 0,5 (Hair et al., 2014). AVE>MSV assessed for discriminant validity, and outcomes showed that all constructs meet the requirements (Hair et al., 2014). Besides these results, all the CR's exceeded recommended threshold value of 0,7

(Hair et al., 2014). The SMCs outcomes above the threshold value of 0,5, which all that results indicating excellent reliability (Hair et al., 2014).

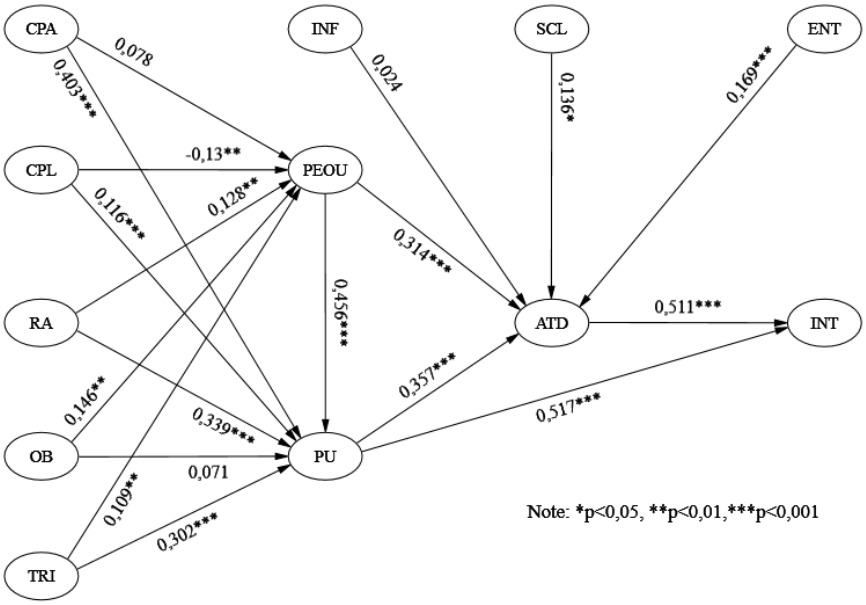
Amos23 was employed to compute model fit indices for proposed structural model and path analysis. The fitness measurements for structural model depicted in Table 4, x2/d.f.=1,48, CFI=0,951, SRMR=0,071, RMSEA=0,058, PClose=0,035, IFI=0,953 (L. t. Hu and Bentler, 1999). The computed model fit indices indicate that the research model is suitable for path analysis.

Table 4. The research model fit indices

Fit indices	Index Value	Model Fit Criterion Thresholds	Interpretation
x^2/d.f (x^2=1144,311, d.f.=773)	1,48	Between 1 and 3	Excellent
CFI	0,951	>0.95	Excellent
SRMR	0,071	<0.08	Excellent
RMSEA	0,058	<0.06	Excellent
PClose	0,035	>0.05	Acceptable
IFI	0,953	>0,95	Excellent

Since the comparison of respective recommended values with model fit indices provided evidence of a good model fit for the proposed research model, in the later section, we examined the significance and strength of hypothesized relations in the research model. Standardized path coefficients and hypothesis test results are in Figure 2. The results indicate that CPL (β=-0,156, p<0,01), RA (β=0,116, p<0,01), OB (β=0,163, p<0,01), TRI (β=0,128, p<0,01) were found significant in influencing PEOU, supporting hypotheses H_3, H_5, H_7, and H_9. PEOU found statistically meaningful that determined by these four variables and resulting in explaining 72% of the variance (R^2). PU influenced by five variables, these were CPA (β=0,491, p<0,001), CPL (β=0,212, p<0,001), RA (β=0,361, p<0,001), TRI (β=0,89, p<0,001), PEOU (β=0,465, p<0,001), supporting hypotheses H_2, H_4, H_6, H_0, and H_{14}.

Figure 2. Path analysis results



PU was found to be significantly affected by these five variables, R^2 resulting in a value of 0.67. Another endogenous variable ATD found that influenced by four variables and resulting in explaining 59% of the variance, these were; SCL (β=0,148, p<0,05), ENT (β=0,229, p<0,001), PEOU (β=0,269, p<0,001), PU (β=0,3, p<0,001), H_{12}, H_{13}, H_{15} and H_{16} supported by statistically. Another result shows that PU (β=0,247, p<0,001) and ATD (β=0,32, p<0,001)

affect the intention to use; thus, H_{17} and H_{18} supported and statistically meaningful. These two paths explain that 48% of the variance in intention. Besides, found that CPA had no direct effect on PEOU, OB had no direct influence on PU and INF had no direct effect on ATD. Therefore, H_1, H_8, H_{11} hypotheses were not statistically supported.

Conclusion and Discussion

The objective of this study is to analyze users' intention toward using social media app with the framework of the TAM, innovation diffusion theory, and psychological motivation factors that of uses and gratification theory. Based on our proposed model, we examined the effects of five innovative attributes (Rogers, 1983) on PEOU, PU. Psychological motivations (Ellison et al., 2006; Jung et al., 2007; Krisanic, 2008) effects on the users' attitude, besides that PU, PEOU, and attitude effect on users' intention (Davis, 1989) were examined, overall results confirmed research model and hypothesis. The outcomes were found consistent with prior studies that PEOU positively influenced by relative advantage, observability, and trialability (Lee et al., 2011), while complexity has the negative influence on PEOU (Hardgrave et al., 2003). It implied that when social media app exceeded the expectation of users' current practices, results of using the app easily seen and understood by its respective users, and decreased risks of users' observe apps effort needed will increase PEOU of users'.

Nevertheless, an increase in users' perception about when learning, understanding to use an app, results with a decrease in users' PEOU. Also, results indicated that compatibility had no significant effect on PEOU, which in line with Lee et al. (2011)'s study. Our research results indicate that PU determined by compatibility, complexity, relative advantage, trialability, and PEOU. Reduced the risk and effort of users to try a social media application will increase the users PU.

On the other hand, providing an app to users in line with their past needs and experiences, and exceeded current practice will increase users' PU. Users felt difficulty in using an app, and they believe that helpful. Users who considered using an app to be accessible to learning and understand, they may not necessarily regard the respective app to be helpful. The users who believe that using a particular app would be easy, consider the app as useful. Consistent with the prior research of Davis (1989), in our research results showed that PU and PEOU influencing the attitude of users towards using the app, addition to that results shows that sociality and entertainment features are also crucial to determining users' attitude. Besides that, attitude and PU have a positive influence on intention, while PEOU has an indirect effect on the intention of users towards using a social media app. These findings are underpinning existing research that found a strong relationship between PU and PEOU, attitude, and PU influence on intention, formerly proposed by Davis (1989).

In line with users' previous experience, providing users' existing values and needs will increase their perception of usefulness about social media apps. Also, this will decrease the adoption of app users adoption time. The level of complexity of social media apps should be well defined since it increasing individuals PU and decreasing PEOU, well-balanced level of complexity will ease of adoption efforts, so users attitude toward using social media apps attitude will improve. In economic terms and also convenience, satisfaction, and social prestige/image provided by offer with social media app need to be well combined. Because all of these are in the context of relative advantage provided by social media apps, the increased relative advantage will increase individuals PU and PEOU. Social media apps should be observable by respective users; this will increase users' adoption rate. These study results are contrary to Legris (2003), and consistent with Tran and Cheng (2007). Observability or in other name demonstrability enable to increase users' PEOU towards the social media apps. Letting individuals have enough time for trial and giving away social media apps for free for some time will increase both individuals PU and PEOU. In perspective of benefits provided with social media app content, users seek to satisfy their sociality and entertainment needs, so that leads to

gratification. Therefore, in the context of sociality, users want to feel belonging to the social groups. Thus social media apps need to be well designed, and its functions enabled users in establishing, improving, and maintaining relationships with other users, so individuals satisfy his or her sociality needs.

Contrary to previous studies (Luo, 2002), but consistent with Dolan et al. (2016) 's study, the information does not affect users' attitude. The results contradict with the prior studies (Stafford and Gonier, 2004; Chung and Austria, 2010); entertainment is an essential aspect of users' attitude towards using social media apps. Therefore it is essential to providing activities, events, task, or idea that holds social media app users' attention and interest, which gives pleasure and delight.

This study has several limitations, so it also provides some opportunities for further research. Since this research focused on only three common U&G motivations (Ellison et al., 2006; Krisanic, 2008; Schaefer, 2008; Brandtzæg and Heim, 2009; Kim et al., 2011; Chang and Zhu, 2011; Lien and Cao, 2014), these are information, sociality, and entertainment. Further studies may focus on other motivations of U&G need to further explanation. These motivations listed as conformity, passing time, social support, self-expression, convenience, product inquiry, game, and updates. Finally, the research data collected from one district, the result may differ among other locations. This study did not categorize users' objective to use such an app and demographic attributes of users. So in this point of view, these attributes can be compared in further researches to understand the social media app users' behaviors better.

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