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Research Article

Why Do Consumers Behave Differently in Personal Information Disclosure and Self-Disclosure? The Role of Personality Traits and Privacy Concern

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ABSTRACT

The aim of this study is to explain differences between consumers' personal information disclosure to companies (IDC behavior) and self-disclosure in social media (SDM behavior) based on personality traits, privacy concern and types of disclosed personal information. The population consisted of consumers who are 18 and over, have one or more social media accounts, and live in Turkey. The data were collected via the online survey method and analyzed by structural equation modeling. As a result of the analyses, it was found that consumers' IDC behavior and SDM behavior differ from each other depending on the disclosed personal information. It was also found that the personality traits have direct and indirect effects on both consumers' personal information disclosure and their self-disclosure in social media, and the privacy concern was the main reason for indirect effects. Accordingly, each of these disclosure behaviors was affected by different personality traits, and the dominant traits shape them. In conclusion, it has been determined that the personality traits and privacy concern have significant roles in the differences between IDC behavior and SDM behavior.

Keywords: Personal Information, Information Disclosure, Self-Disclosure, Consumer Behavior, Personality Traits, Privacy Concern, Structural Equation Modeling

Tüketiciler Kişisel Bilgilerini İşletmelerle ve Kişilerle Paylaşırken Niçin Farklı Davranırlar? Kişilik Özellikleri ve Gizlilik Endişesinin Rolü

ÖZ

Bu çalışmanın amacı, tüketicilerin kişisel bilgilerini doğrudan işletmelerle paylaşma davranışları (IDC davranışı) ile sosyal medyada işletmeler dışındaki kişilerle paylaşma davranışları (SDM davranışı) arasındaki farklılıkları kişilik özellikleri, gizlilik endişesi ve paylaşılan bilgi türü açısından açıklamaktır. Çalışmanın anakütlesini Türkiye'de yaşayan, bir veya daha fazla sosyal medya hesabı olan, 18 yaş ve üzerindeki tüketiciler oluşturmaktadır. Çalışmanın verileri çevrimiçi anket yöntemi kullanılarak toplanmış ve yapısal eşitlik modellemesi ile analiz edilmiştir. Analizler sonucunda, tüketicilerin IDC davranışları ile SDM davranışlarının paylaşılan bilgilere bağlı olarak farklılık gösterdiği bulunmuştur. Kişilik özelliklerinin her iki bilgi paylaşma davranışını da hem doğrudan hem de dolaylı olarak etkilediği, dolaylı etkilerin ise gizlilik endişesi aracılığıyla meydana geldiği bulgusuna ulaşılmıştır. Ayrıca bilgi paylaşma davranışlarının her birinin farklı kişilik özelliklerinden etkilendiği ve baskın olan kişilik özelliklerinin farklı davranışların doğmasına neden olduğu bulunmuştur. Sonuç olarak kişilik özelliklerinin ve gizlilik endişesinin IDC davranışı ve SDM davranışı arasındaki farklılıklarda önemli rollere sahip olduğu belirlenmiştir.

Anahtar Kelimeler: Kişisel Bilgi, Bilgi Paylaşımı, Kendini İfşa, Tüketici Davranışı, Kişilik Özellikleri, Gizlilik Endişesi, Yapısal Eşitlik Modellemesi

1. Introduction

Companies make use of consumers' personal information to identify consumer expectations, to develop effective marketing and communication strategies that can create satisfaction and loyalty, and to gain a competitive advantage (Phelps et al., 2000). Consumer information is often regarded as a valuable commodity in today's communication environment where asymmetric information flow is intense and semantic technologies develop. Companies try to obtain this information by providing benefits and incentives to consumers (Beldad et al., 2011; Shibchurn & Yan, 2015). Companies can use consumers' personal information to offer personalized messages, information, products, and services.

The personal information sharing behavior of consumers is explained by the concept of information disclosure. Information disclosure in the context of business refers to sharing consumers' personal information such as biographical and demographic characteristics, lifestyle, shopping habits, consumption preferences with companies (hereafter 'IDC Behavior') (Dinev & Hart, 2006; Morosan & DeFranco, 2015). Consumers can disclose their personal information to obtain personalized services, various privileges, awards, discounts and financial advantages (Caudill & Murphy, 2000; Phelps et al., 2000; Xu et al., 2011; Li, 2014).

Developments in information and communication technologies stimulate consumers' information disclosure and make it easier. Along with the development of the Internet and related technologies, alternative channels have been developed for consumers to disclose information, and it continues to grow. Moreover, many companies implement a variety of promotional activities and practices for consumers to disclose their personal information. Thus, consumers are able to disclose their personal information directly to companies through online and offline platforms and tools.

In the online environment, the scope of information disclosure is not limited to disclosure of any personal information to companies directly. The development of participatory web and social media increases the importance of user-generated content (Özkan & Tolon, 2015), and online social media platforms like Facebook, Twitter and Instagram change the way how people communicate (Sharma & Crossler, 2014). Additionally, the increased and widespread use of innovative technologies, especially mobile technologies, lead people to disclose their personal information in online environments for various reasons.

Online social media platforms allow individuals to disclose their personal information deliberately and voluntarily in interpersonal relationships on their own (Lowry et al., 2011). In terms of social media, information disclosure is expressed as the level of information that a user shares during participation and interaction process on these platforms (Krasnova et al., 2010). Likewise, through these platforms, consumers can share their personal information with their contacts (friends, followers, etc.), and even with the entire online network. This behavior is also expressed by the concept of "self-disclosure" (hereafter 'SDM Behavior') (Nguyen et al., 2012). Consumers' reasons for SDM behavior can be different from the reasons for IDC behavior (e.g. personalization, monetary benefits). For example, social network users generally

disclose their personal information for non-monetary reasons (socialization, entertainment, self-presentation, etc.) (Shibchurn & Yan, 2015).

It is possible that consumers' IDC behavior and SDM behavior occur at different frequencies, widths, and depths (Nguyen et al., 2012). For example, a consumer may be worried or hesitant to disclose his/her personal information to companies directly, but the same person may disclose his/her various personal information including personally identifiable information, interests, places he/she has visited, personal photos and videos to other contacts or anyone on social media platforms without any worries. However, such information disclosed by consumers can be easily collected and processed by companies through some methods such as data mining, machine learning etc. (Smith et al., 2011). This situation is the main inspiration for this study. Basically, in this study, it aimed to explain the differences between consumers' disclosure behaviors (IDC behavior and SDM behavior) based on their personality traits, privacy concern, and types of disclosed personal information.

The possibility of others' (people, companies, institutions, etc.) misuse of the various information disclosed by a person emphasizes the concept of privacy. Information privacy, seen as one of the important ethical and legal problems of today's information age (Mason, 1986; Caudill & Murphy, 2000; Acquisti et al., 2015), refers to the degree of control over how information disclosed by a person is being used (Bélanger & Crossler, 2011; Pavlou, 2011; Xu et al., 2011; Bansal et al., 2016). The decrease in this control or belief about the misuse of personal information beyond control is expressed as privacy concern (Baek & Morimoto, 2012). It is possible to reduce or differentiate information disclosure by a consumer who is concerned about information privacy (Li, 2014; Shibchurn & Yan, 2015; Hajli & Lin, 2016). Nonetheless, it is possible for consumers to compromise on personal privacy in exchange for the potential benefits they will obtain from information disclosure (Xu et al., 2011).

Several studies in literature reveal that consumers' privacy concern and disclosure behavior are shaped by various consumer characteristics (Phelps et al., 2000; Bélanger & Crossler, 2011). In this context, personality traits are seen as one of the leading consumer characteristics that change and shape consumer behavior (Kassarjian, 1971; Baumgartner, 2002). Personality refers to the dynamic and organized sequence of a person's characteristics that uniquely influences his/her perceptions, motivations and behaviors in various situations (Ryckman, 2012). Personality traits are also described as the classification of individual differences in reflecting patterns that define people's feelings, thoughts and behaviors in a relatively stable manner (McCrae & Costa, 2003; Borghans et al., 2008).

Although it is possible that consumers' personality traits have some effect on the differentiation of their disclosure behaviors, such as IDC behavior and SDM behavior, this has not been explained in detail in the literature. In this study, it is thought that personality traits and privacy concern are significant determinants of differences in these disclosure behaviors. From this point of view, in the present study, the following three questions were investigated:

(1) Do consumers' IDC behavior and SDM behavior differ according to the types of disclosed personal information?

(2) Do consumers' personality traits and privacy concern have any effect on disclosure behaviors separately?

(3) Do consumers' personality traits have any effect on their privacy concern?

2. Conceptual Framework and Research Hypotheses

The findings related to information disclosure, self-disclosure, privacy concern and personality traits in the literature are discussed in the following headings. The hypotheses of the study are also presented. Figure 1 shows the research model.

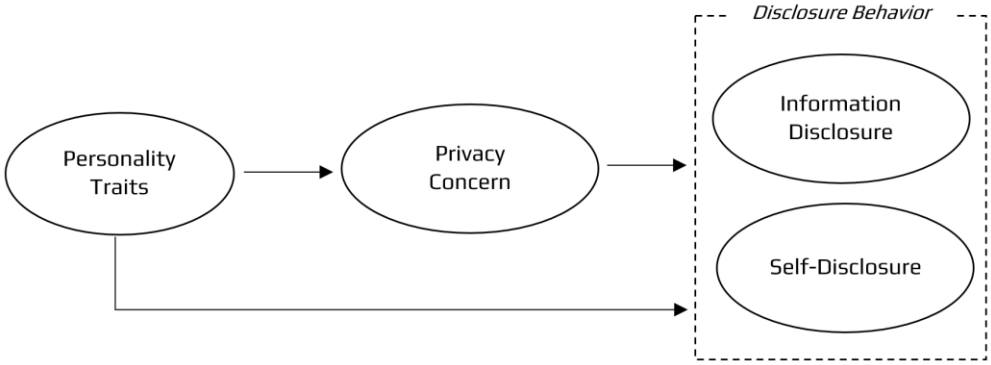

Figure 1. Research model

2.1. Information Disclosure and Self-Disclosure

Self-disclosure is traditionally defined as any message that a person transmits about himself or herself while communicating with other people (Wheeless & Grotz, 1976). Similarly, consumers' information disclosure includes all kinds of personal information that they provide about themselves in communication with companies (Morosan & DeFranco, 2015; Shibchurn & Yan, 2015; Benson et al., 2015). Personal information disclosure to companies can be made through numerous communication channels including online and mobile.

Thanks to the development of new technologies, information disclosure has become an integral part of the online activities (Sharma & Crossler, 2014). In the online environment, information disclosure is not only made for companies. Consumers also disclose some personal information in the context of the user generated content (Özkan & Tolon, 2015). In online environments where it is possible to make misrepresentations, to feel anonymous and less vulnerable, information disclosure is more widespread and apparent (Benson et al., 2015). Especially on online social network sites (SNS), it is common for people to disclose personal information to other people involved in their social networks (as self-disclosure). Moreover, self-disclosure in social media is part of the voluntary activity. In other words, people do not make any commitment to others about which activities they will participate in or how much information they will disclose (Hui et al., 2006).

Information disclosure is usually examined in three dimensions (frequency, width, and depth): (1) the frequency of disclosure is the amount of information disclosed, (2) the width of disclosure is the scope or diversity of disclosure issues, and (3) the depth of

disclosure is the degree of privacy of the personal information disclosed (Nguyen et al., 2012). Consumers' beliefs and behaviors related to information disclosure vary depending on the type and attribute of the information disclosed (Dinev & Hart, 2006; Phelps et al., 2000; Sheehan & Hoy, 2000). Additionally, as the perceived sensitivity of this personal information increases, the willingness to disclose personal information is affected (Milne et al., 2017).

Smith et al. (2011) state that the types of personal information frequently studied in the literature are classified as work, consumer, biographical, medical, financial, behavioral, general, and social. Traditionally, consumer information used for marketing purposes is divided into five broad categories such as demographic characteristics, personal identifiers (e.g. addresses, identity numbers), lifestyle characteristics (including media habits), shopping/purchasing habits, and financial data (Phelps et al., 2000). Milne et al. (2017) also classified the types of personal information in six categories from least sensitive to most sensitive: (1) basic demographics (gender, date of birth, marital status, height, weight, etc.), (2) personal preferences (general, political, and religious opinions etc.), (3) contact information (home phone, mobile phone, business address, etc.), (4) community interaction (family and friend information, social networking profile, photos showing you), (5) financial information (bank account information, credit card information, mother's maiden name, etc.), and (6) secure identifiers (home address, GPS location, medical information, fingerprint, identification number, etc.).

Consumers' potential benefit and risk perceptions while having interactions with companies may differ from those of non-business interactions in the online environment. This situation may also lead to differences in information disclosed by consumers. For instance, Shibchurn & Yan (2015) investigated consumers' information disclosure intention depending on the types of personal information at different sensitivity levels. As a result, they found that consumers had different intentions of disclosure for different types of personal information. By this way, the following hypothesis is proposed for the potential differences in consumers' alternative disclosure behaviors (IDC behavior and SDM behavior) depending on the types of disclosed personal information, taking into account the classification of information based on the sensitivity level.

> **Hypothesis 1:** The personal information disclosed by consumers differ according to their IDC behavior and SDM behavior.

2.2. Information Privacy and Privacy Concern

Consumers are expected to be interested in controlling information about themselves, especially the personal information they disclose, which is explained by the concept of privacy (Chellappa & Sin, 2005). Clarke (1999) states that privacy has four dimensions: (1) the privacy of a person, (2) the privacy of personal behavior, (3) the privacy of personal communication, and (4) the privacy of personal data. Nowadays, personal communication privacy and data privacy are considered as information privacy, because communication is mostly digitized and stored as information (Belanger & Crossler, 2011). The information privacy investigated in areas such as marketing, management, psychology, law, information science is often defined as the ability to control how an individual's personal information is collected

and used (e.g. Pavlou, 2011; Xu et al., 2011; Belanger & Crossler, 2011; Bansal et al., 2016).

The diversification of options for collecting, processing, distributing and using personal information and the increase in the use of information processing technologies trigger consumer concerns (Belanger & Crossler, 2011). Consumers who are concerned about privacy issues may become increasingly reluctant to disclose their personal information and may even resort to fabricating this information to reduce the risk of abuse (Li & Santhanam, 2011; Bansal et al., 2016). This situation is explained by the concept of privacy concern (Malhotra et al., 2004; Awad & Krishnan, 2006; Dinev & Hart, 2006; Bansal et al., 2016). Baek & Morimoto (2012) defined privacy concern as a level of worrying about the potential occupation of the right to control and prevent a consumer's disclosure of personal information to others. Consumers have beliefs and concerns on whether their disclosed information will be used by unauthorized people and/or third party institutions for undesirable purposes and if they lose their control over privacy against potential risks (Xu et al., 2011).

Smith et al. (1996) state that the concerns for information privacy have four dimensions: (1) concern for the collection of personal information, (2) concern for unauthorized secondary use of personal information, (3) concern for inappropriate access of personal information, and (4) concern for errors in personal information.

A consumer with a high level of privacy concern is more sensitive to the protection of her/his privacy, especially personal information. Moreover, it is likely that s/he will be more cautious and reluctant to disclose her/his personal information. Several studies in the literature support this fact; these studies emphasize the negative effect of consumers' privacy concern on personal information disclosure to companies (Phelps et al., 2000; Sheehan & Hoy, 2000; Malhotra et al., 2004; Dinev & Hart, 2006; Bansal et al., 2010; Li, 2014; Bansal et al., 2016). Based on these findings, the following hypothesis is proposed.

Hypothesis 2: Consumers' privacy concern affects their IDC behavior.

Likewise, it is emphasized in various studies in the literature that consumers' privacy concern play an important role in disclosing personal information while they are participating in online activities (especially in social media) (Posey et al., 2010; Krasnova et al., 2010; Benson et al., 2015; Shibchurn & Yan, 2015; Hajli & Lin, 2016; Hallam & Zanella, 2017). Accordingly, it is likely that the increase in consumers' privacy concern will cause them to be less willing to disclose their personal information on social media platforms. Based on these findings and approaches, the following hypothesis is proposed.

Hypothesis 3: Consumers' privacy concern affects their SDM behavior.

2.3. Personality Traits

Personality, which is significant for understanding consumer behavior, is defined as a set of characteristics that a person possesses which influence the perceptions and behaviors of him/her and determine the patterns of interaction with the environment (Ryckman, 2012). Based on this concept, personality traits are described as the classification of individual differences in reflecting patterns that define people's feelings, thoughts and behaviors in a relatively stable manner (McCrae & Costa, 2003;

Borghans et al., 2008). Furthermore, personality traits are based on the self-assessment of the individual's level of self-reflection of personality-specific short descriptive adjectives or sentences (Goldberg, 1990; Benet-Martinez & John, 1998). Several studies in the literature have shown that personality traits can explain a significant aspect of consumers' perceptions, decisions, and behaviors (Kassarjian, 1971; Baumgartner, 2002).

Attempts to determine the adjectives and short sentences that represent personality traits have resulted in approaches used today (e.g. Galton, 1884; Allport & Odbert, 1936; Cattell, 1943). Various studies have also been carried out in the literature for the categorization and classification of these adjectives and short sentences (e.g. Norman, 1963; Costa & McCrae, 1985; Goldberg, 1990). As a result of these studies, it is stated that today's most adopted classification is the Five Factor Model (FFM) (Parks-Leduc et al., 2015). In this model, a large number of adjectives and short sentences have been combined into five broad trait dimensions and an integrative personality taxonomy has been constituted with common names (John & Naumann, 2010).

In the literature, two models are frequently used for the FFM (Bansal et al., 2016). These models, based on the study of Norman (1963) basically, have been named as "NEO five-factor inventory" (Costa & McCrae, 1985; Costa & McCrae, 1992) and "Big-Five factor model" (Goldberg, 1990; Goldberg, 1992) depending on the structure they categorized.

In the present study, Goldberg (1990)'s Big-Five approach has been adopted for explaining and measuring personality traits. According to the Big-Five approach, there are five basic personality traits. These are classified as extraversion, conscientiousness, agreeableness, emotional instability, and intellect (Goldberg, 1990).

Extraversion refers to the individual's social and interaction intensity (Choi et al., 2015), and represents the tendency of people to be talkative, optimistic, assertive, active and energetic (Parks-Leduc et al., 2015). These people enjoy social activities and prefer to be with others rather than being alone (LePine & Van Dyne, 2001). Conscientiousness represents the tendency of individuals to be responsible, reliable, ordered, disciplined, hardworking, and productive (Barrick & Mount, 1991; Parks-Leduc et al., 2015). At the same time, it is concerned with precaution and foresight. Conscientious individuals focus on detail (Chauvin et al., 2007), and are less willing to engage in risk-taking or dangerous situations (Bansal et al., 2016). These individuals also do not behave spontaneously but instead, they prefer to act planned and systematically (Barrick et al., 2001). Agreeableness represents the tendency of individuals to be helpful, good-natured, collaborative, sympathetic, reassuring, gentle, tolerant, and forgiving (Barrick & Mount, 1991; Parks-Leduc et al., 2015). Agreeable individuals are more successful in being with other people and are involved in better quality interactions (Costa & McCrae, 1992). Emotional stability represents the tendency of individuals to be calm, self-confident, determined, durable, and balanced (Parks-Leduc et al., 2015). An emotionally unstable individual tends to be anxious, stressful, insecure, and nervous (Barrick & Mount, 1991). Past studies have shown that emotionally unstable people are more likely to behave superficially during their interaction with other people since it is more difficult for them to change their

emotions compared to others (Kiffin-Petersen et al., 2011). Intellect represents the intellectual abilities of individuals such as imagination, curiosity, open-mindedness, and artistic sensitivity (Barrick & Mount, 1991). It is also referred to openness to experience. Individuals who have this trait tend to be intellectual, creative, innovative, and tend to discover new ideas (Parks-Leduc et al., 2015).

Bélanger & Crossler (2011) state that various individual differences have some effects on privacy concern. Among these individual differences, in addition to the factors such as gender, age, and education, they point out that personality traits are also included. Various studies in the literature have found that personality traits have some effects on individual privacy concern (e.g. Lu et al., 2004; Korzaan & Boswell, 2008; Bansal et al., 2010; Bansal et al., 2016; Pentina et al., 2016). For example, Bansal et al. (2016) found that social-orientated personality traits (extraversion, agreeableness, emotional instability) negatively affected one's privacy concern, although non-social personality traits (conscientiousness and intellect) had no effect. More clearly, it was found that while extraversion had a negative effect on privacy concern, emotional instability and agreeableness had a positive effect. Based on these findings, the following hypothesis is proposed:

Hypothesis 4: Consumers' personality traits affect their privacy concern.

Social interactions often require disclosure of personal information. Therefore, it is expected that social-oriented personality traits will increase the information disclosure of people (Bansal et al., 2016). Bibby (2008) found that extraversion is related to the self-disclosure of the individual. Moore & McElroy (2012) found that conscientiousness, extraversion and agreeableness traits affect users' level of information disclosure in social media. Hollenbaugh & Ferris (2014) also found that high extraversion increases the depth of the disclosure positively and likewise, the high openness to experience increases the width of the disclosure positively. Based on these findings, the following hypotheses are proposed separately depending on the consumers' IDC behavior and SDM behavior described in detail in the previous headings of the present study.

Hypothesis 5: Consumers' personality traits affect their IDC behavior.

Hypothesis 6: Consumers' personality traits affect their SDM behavior.

3. Method

In this study, personality traits, privacy concern, and disclosure behavior have been determined as the research variables. The personality traits were measured with the international version (IPIP) of the Big-Five personality scale developed by Goldberg (1992). The privacy concern was measured using the scale obtained by adaptation of scales in Smith et al. (1996), Malhotra et al. (2004) and Li (2014) studies. The items of both scales were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Disclosure behavior was measured separately for two different situations, termed as IDC behavior and SDM behavior. The items of these scales were made up of various personal information representing the information that consumers frequently disclosed. That personal information, which includes various information at different

sensitivity levels, was determined by taking into consideration several studies in the literature (Gross & Acquisti, 2005; Smith et al., 2011; Shibchurn & Yan, 2015; Milne et al., 2017). Consequently, based on the following explanations for both behavior, the items were rated on a 5-point scale ranging from 1 (never) to 5 (always) separately:

(1) For SDM behavior: "Think about all your past posts in pages such as profile, timeline, wall of your social media accounts for your friends, followers, and other contacts. Accordingly, please indicate your level of sharing of personal information below on social media platforms."

(2) For IDC behavior: "Think about all the things you share with brands or companies in the past via their communication channels such as websites, mobile applications, membership cards, various events, call centers. Accordingly, please indicate your level of sharing of personal information below with companies or brands."

The population consisted of consumers who are 18 and over, have one or more social media accounts, and live in Turkey. The data were collected via the online survey method from a sample determined by the Internet sampling approach (Malhotra, 2010). During the data collection process, an online questionnaire was prepared and the questionnaire link supported by text and visual content was shared with various groups on social media platforms. Moreover, the distribution of the questionnaire in the online environment was promoted with the help of some popular social-media users to diversify the participant profile. At the end of the data collection process, a total of 402 people were finally included in the study. When this data was examined demographically, it was observed that the sample is mostly composed of people with a bachelor's and postgraduate degree (74,1%), women (78,4%), and the age of 18-32 years (83,1%).

4. Analysis and Findings

The means of disclosure level of each personal information is shown separately for each disclosure behavior in Table 1. Additionally, based on these means, paired samples t-test was used to analyze the differences between IDC behavior and SDM behavior (see Table 1 for results). As a result of this test, it was found that there is a statistically significant difference between the two disclosure behaviors depending on the type of disclosed personal information, except for "real name", "gender" and "current working position and workplace" ($p<.05$). Accordingly, Hypothesis 1 was supported.

For the purpose of testing the other hypotheses, structural equation modeling (SEM) was used. In the SEM process, a two-stage approach proposed by Anderson & Gerbing (1988) had been adopted. Accordingly, a measurement model was constructed and validated by confirmatory factor analysis (CFA). Then, the structural model was developed by taking into account the final measurement model, and tested by path analysis (PA).

Type of disclosed personal information		Mean of SDM	Mean of IDC	Mean Diff.	t
IN1	Real name	4,21	4,31	-0,10	-1,48
IN2	Real surname	4,05	**4,23**	-0,08	-2,66*
IN3	Age / Birth date	2,91	**3,50**	-0,59	-8,18*
IN4	Gender	4,23	4,17	0,06	0,93
IN5	Photos and videos showing you	**3,30**	2,04	1,26	18,33*
IN6	Interests	**3,35**	2,43	0,92	12,81*
IN7	Home address	1,19	**2,56**	-1,37	-20,02*
IN8	Work address	1,53	**2,24**	-0,71	-10,52*
IN9	Current working position and workplace	2,31	2,23	0,08	1,27
IN10	Working history	**2,12**	1,96	0,16	2,45*
IN11	Income	1,11	**1,51**	-0,40	-9,39*
IN12	Mobile phone number	1,34	**2,86**	-1,52	-20,15*
IN13	E-mail address	2,28	**3,39**	-1,11	-15,21*
IN14	Educational background	**3,14**	2,54	0,60	8,38*
IN15	Relationship status	**2,26**	1,74	0,52	9,56*
IN16	Mood and feelings	**2,39**	1,69	0,70	11,44*
IN17	Political views	**2,10**	1,42	0,68	12,56*
IN18	Religious views	**2,18**	1,54	0,64	11,45*
IN19	General views	**3,04**	2,19	0,85	13,47*
IN20	Family details	**2,00**	1,67	0,33	6,52*
IN21	Banking transactions, investment / stocks, portfolio	1,03	**1,24**	-0,21	-5,89*
IN22	Purchase history	1,27	**1,87**	-0,60	-11,57*
IN23	Check-in history (locations / places)	**2,71**	1,91	0,80	14,10*
IN24	Sports activities	**2,14**	1,69	0,44	8,10*

* Significant differences (p <0,05, df: 401)

Table 1. Results of paired samples t-test

The research variables have a large number of items. Therefore, in order to perform the SEM efficiently, the parcels representing each variable were created by item parceling method before applying SEM (Little et al., 2002; Little et al., 2013). Exploratory factor analysis (EFA) was used to decide the appropriate factor and item structure for item parceling and to evaluate the construct validity of the scales. Principal axis factoring method and varimax rotation were applied in EFA used to each of the research variables separately (Hair et al., 2010; Malhotra, 2010). In order to get suitable parcels, the number of items under each factor should be balanced; thus, the EFA was repeated until reaching the suitable factor structure. Table 2 shows the final factor structures and the item loadings.

As a result of the EFA, it was concluded that the personality traits consisted of five factors, each consist of six items, which is similar to the original scale structure (Goldberg, 1992). These factors were named as emotional stability, agreeableness, conscientiousness, extraversion, and intellect respectively, taking into account the original scale structure (Goldberg, 1992). In the subsequent analyses, the sub-dimensions of the personality traits were used as individual variables to present their relative effects on the dependent variable. Thus, for personality traits, sub-hypotheses were formulated (4.1, 4.2,...,6.5). For privacy concern, it was found that it is represented by one factor consisting of six items.

Factor	Item		Item loadings
Personality traits: Emotional stability (ES)	P24	Am easily disturbed.*	0,802
	P39	Have frequent mood swings.*	0,790
	P49	Often feel blue.*	0,749
	P34	Change my mood a lot.*	0,747
	P4	Get stressed out easily.*	0,735
	P29	Get upset easily.*	0,724
Personality traits: Agreeableness (AG)	P22	Am not interested in other people's problems.*	0,739
	P37	Take time out for others.	0,736
	P7	Am interested in people.	0,723
	P32	Am not really interested in others.*	0,702
	P42	Feel others' emotions.	0,676
	P17	Sympathize with others' feelings.	0,628
Personality traits: Conscientiousness (CN)	P33	Like order.	0,778
	P23	Get chores done right away.	0,742
	P43	Follow a schedule.	0,732
	P28	Often forget to put things back in their proper place.*	0,652
	P38	Shirk my duties. (R)	0,615
	P3	Am always prepared.	0,608
Personality traits: Extraversion (EX)	P31	Talk to a lot of different people at parties.	0,704
	P11	Feel comfortable around people.	0,696
	P46	Am quiet around strangers.*	0,696
	P21	Start conversations.	0,656
	P1	Am the life of the party.	0,636
	P41	Don't mind being the center of attention.	0,559
Personality traits: Intellect (INT)	P50	Am full of ideas.	0,800
	P25	Have excellent ideas.	0,705
	P35	Am quick to understand things.	0,584
	P5	Have a rich vocabulary.	0,579
	P45	Spend time reflecting on things.	0,562
	P15	Have a vivid imagination.	0,558
Privacy concern (PC)	C4	Compared to other people, I am more concerned about potential threats to my personal privacy.	0,783
	C3	In my opinion, it is important to protect my personal privacy from other individuals and companies.	0,733
	C5	Compared to other people, I don't worry much about personal information privacy.*	0,701
	C2	I don't refrain from sharing/disclosing my personal information.*	0,639
	C6	Compared to other people, I am more sensitive about how people or organizations handle my personal information.	0,579
	C1	Today, personal information privacy is an important issue.	0,550
			* Reverse coded

Table 2. Results of exploratory factor analysis

Table 3 shows the parcel structures created by item parceling method and the items used for the formation of the parcels. The parcels were created considering the final factor (and item) structures obtained by EFA. The balanced approach of Little et al. (2013) was used for item parceling. Following this approach, the first parcel was constructed by taking the sum (or average) of the items having the highest and the

lowest factor load value from each of the factors. Then, a similar process was applied for the items having the second highest and second lowest factor loads. This process was continued to be applied for covering all items and the final parcel structure was formed.

Factor	Parcel	Items
Personality traits: Emotional stability (ES)	ES1	P4, P39
	ES2	P24, P29
	ES3	P34, P49
Personality traits: Agreeableness (AG)	AG1	P7, P17
	AG2	P22, P32
	AG3	P37, P42
Personality traits: Conscientiousness (CN)	CN1	P33, P38
	CN2	P3, P43
	CN3	P23, P28
Personality traits: Extraversion (EX)	EX1	P31, P41
	EX2	P1, P21
	EX3	P11, P46
Personality traits: Intellect (INT)	INT1	P45, P50
	INT2	P15, P25
	INT3	P5, P35
Privacy concern (PC)	PC1	C1, C4
	PC2	C3, C6
	PC3	C2, C5
Self-disclosure in social media (SDM)	SDM1	IN/S1, IN/S2, IN/S10, IN/S15, IN/S20, IN/S22
	SDM2	IN/S6, IN/S9, IN/S18, IN/S21, IN/S23, IN/S24
	SDM3	IN/S4, IN/S5, IN/S7, IN/S12, IN/S13, IN/S19
	SDM4	IN/S3, IN/S8, IN/S11, IN/S14, IN/S16, IN/S17
Information disclosure to companies (IDC)	IDC1	IN/C1, IN/C2, IN/C5, IN/C7, IN/C11, IN/C20
	IDC2	IN/C9, IN/C10, IN/C12, IN/C15, IN/C22, IN/C23
	IDC3	IN/C6, IN/C13, IN/C17, IN/C18, IN/C21, IN/C24
	IDC4	IN/C3, IN/C4, IN/C8, IN/C14, IN/C16, IN/C19

Note: IN/S refers to the information disclosed in social media; IN/C refers to the information disclosed to companies.

Table 3. Items used in parcels and created parcels

The EFA, performed on the disclosure scale, was not for dimension reduction; instead, it was used for item parceling process. As a result, the items of this scale were parceled into four parcels, considering the communality values and factor loadings obtained from the EFA. Since the scale was used to measure the two disclosure behaviors (IDC behavior and SDM behavior) separately, EFA and item parceling for this scale were performed twice (see table 3).

Measurement Model

Convergent validity and discriminant validity methods were checked to assess the construct validity of the measurement model (Malhotra, 2010). According to the approach proposed by Fornell & Larcker (1981), AVE and CR values were calculated for assessing convergent validity (AVE>0.50, CR>0.70). Furthermore, it was considered that the standardized factor loadings of the observed variables (parcels) under each latent variable should be 0.60 and above (Malhotra, 2010). The Cronbach's alpha values were also calculated. Table 4 shows the standardized factor loadings (λ), CR, AVE, and Cronbach alpha values. As seen in Table 4, the measurement model meets the minimum criteria necessary for convergent validity.

Latent variables	Parcels	λ	AVE	CR	α
Personality traits: Extraversion (EX)	EX1	0,748	0,54	0,78	0,77
	EX2	0,737			
	EX3	0,710			
Personality traits: Agreeableness (AG)	AG1	0,878	0,62	0,83	0,82
	AG2	0,670			
	AG3	0,799			
Personality traits: Conscientiousness (CN)	CN1	0,819	0,57	0,80	0,78
	CN2	0,696			
	CN3	0,737			
Personality traits: Emotional stability (ES)	ES1	0,921	0,72	0,89	0,88
	ES2	0,800			
	ES3	0,826			
Personality traits: Intellect (INT)	INT1	0,776	0,50	0,75	0,74
	INT2	0,699			
	INT3	0,631			
Privacy concern (PC)	PC1	0,790	0,55	0,79	0,77
	PC2	0,706			
	PC3	0,729			
Self-disclosure in social media (SDM)	SDM1	0,737	0,62	0,87	0,87
	SDM2	0,807			
	SDM3	0,749			
	SDM4	0,861			
Information disclosure to companies (IDC)	IDC1	0,772	0,70	0,90	0,90
	IDC2	0,878			
	IDC3	0,819			
	IDC4	0,882			

Table 4. Results of confirmatory factor analysis

For the evaluation of the discriminant validity of the measurement model, it was noted that the correlation between all latent variables should not be 0.90 and above (Hair et al., 2010), and the correlation between any two latent variables should not be greater than the square root of the AVE values associated with these variables (Fornell & Larcker, 1981). The correlation matrix showing the correlations between the latent variables is given in Table 5. The diagonal of the matrix represents the square root of the AVE values of the variables. As seen in Table 5, the measurement model meets the minimum requirements for discriminant validity.

	Mean	Std. Dev.	EX	AG	CN	ES	INT	PC	SDM	IDC
EX	3,296	0,741	*0,732*							
AG	4,040	0,445	0,519	*0,787*						
CN	3,527	0,765	0,078	0,122	*0,752*					
ES	2,651	0,938	0,193	-0,142	0,145	*0,851*				
INT	3,942	0,499	0,503	0,373	0,175	-0,076	*0,704*			
PC	3,999	0,536	-0,044	0,111	0,308	-0,056	0,140	*0,743*		
SDM	2,425	0,361	0,183	0,157	-0,024	-0,068	0,091	-0,359	*0,790*	
IDC	2,371	0,556	0,020	0,070	0,023	-0,056	0,051	-0,284	0,639	*0,839*
Note: The square root of AVE is shown as italic at diagonal										

Table 5. Correlation matrix and square root of AVE

By using model fit indices (χ^2 /df, RMSEA, SRMR, CFI, NFI, AGFI) frequently used in the literature (Hu & Bentler, 1999; Hooper et al., 2008; Malhotra, 2010), it was evaluated whether the measurement model and the structural model fit the data. Table 6 shows the model fit values calculated for these models. As seen in Table 6, the measurement model meets the minimum requirements for model fit.

Fit index	χ^2 /df	RMSEA	SRMR	CFI	NFI	AGFI
Recommended value	<3,00	<0,08	<0,08	>0,90	>0,90	>0,80
Measurement model	2,296	0,057	0,052	0,954	0,921	0,862
Structural model	2,712	0,071	0,079	0,939	0,906	0,840

Abbreviations are: χ^2/df, the ratio between χ^2 and degrees of freedom; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; CFI, comparative fit index; NFI, normed fit index; NNFI, the non-normed fit index; AGFI, adjusted goodness of fit index.

Table 6. Model fit values

Structural Model

The structural model based on the final measurement model was tested by path analysis. As seen in Table 6, the structural model meets the minimum requirements for model fit. Table 7 shows the standardized beta coefficients obtained as a result of the path analysis and also the status whether the research hypotheses are supported. In conclusion, hypothesis 2, hypothesis 3, hypothesis 4.1, hypothesis 4.3, hypothesis 4.5, hypothesis 5.3, hypothesis 6.2, and hypothesis 6.3 were supported ($p<.05$).

Hypothesis	Path	Std. Coeff.(β)	Supported or not
2	PC → IDC	-0,47***	Yes
3	PC → SDM	-0,52***	Yes
4.1	EX → PC	-0,22**	Yes
4.2	AG → PC	0,13	No
4.3	CN → PC	0,30***	Yes
4.4	ES → PC	-0,02	No
4.5	INT → PC	0,16*	Yes
5.1	EX → IDC	-0,14	No
5.2	AG → IDC	0,14	No
5.3	CN → IDC	0,18**	Yes
5.4	ES → IDC	-0,06	No
5.5	INT → IDC	0,12	No
6.1	EX → SDM	0,02	No
6.2	AG → SDM	0,16*	Yes
6.3	CN → SDM	0,15*	Yes
6.4	ES → SDM	-0,09	No
6.5	INT → SDM	0,09	No

Table 7. Standardized path coefficients and their significance

5. Discussion and Conclusion

The aim of this study is to explain the differences between consumers' IDC behavior and SDM behavior based on personality traits, privacy concern and types of disclosed personal information. The disclosure behaviors were measured depending on various types of personal information determined according to sensitivity levels. The personality traits were also measured in the direction of the Big Five model approach. The effects of personality traits on other variables were assessed separately for each trait, namely extraversion, conscientiousness, agreeableness, emotional stability, intellect.

In this study, first, it has been found that there are differences between IDC behavior and SDM behavior based on the disclosed personal information. Accordingly, consumers mostly disclose their contact information (home address, work address, mobile phone number, and e-mail address) and shopping preferences to companies directly. On the contrary, in the case of self-disclosure in social media, they disclose photos and videos, interests, general opinions, feelings, thoughts, and check-in information much more. As a result, it has been concluded that consumers behave differently in different disclosure conditions (such as information disclosure to companies, self-disclosure). Besides, there are also some conflicting situations in the disclosure behavior of consumers. Although they partially tend to be more reluctant to disclose sensitive personal information to companies, they act more comfortable about disclosing such information to others on social media where control of information is more limited.

Secondly, it has been found that personality traits have some significant effects on both disclosure behaviors and privacy concern. Agreeableness and conscientiousness directly and positively affect SDM behavior. Conscientiousness has also a direct and positive effect on IDC behavior. Likewise, extraversion, conscientiousness, and intellect have direct effects on privacy concern. The effects of conscientiousness and intellect are positive, whereas the effect of extraversion is negative. On the other hand, it has also been found that privacy concern negatively affects both disclosure behaviors. Considering that some personality traits have direct effects on privacy concern, it has been concluded that personality traits have indirect effects on IDC behavior and SDM behavior. Accordingly, the indirect effect of extraversion is positive, whereas the indirect effects of conscientiousness and intellect are negative. Furthermore, it has been observed that the effects of personality traits and privacy concern on IDC behavior and SDM behavior differ in part. Specifically, although agreeableness has a positive effect on SDM behavior, it hasn't affected IDC behavior. Conscientiousness has some effects on both disclosure behaviors, but it particularly has higher effect-size on IDC behaviors. On the other hand, although privacy concern has negative effects on both disclosure behaviors, it has higher negative effect-size on SDM behavior in particular.

By taking all the findings into consideration, it has been concluded that personality traits play a significant role in consumers' disclosure behaviors. The findings are consistent with the findings of various studies in the literature (Korzaan & Boswell, 2008; Bibby, 2008; Moore & McElroy, 2012; Hollenbaugh & Ferris, 2014; Bansal et al., 2016). However, it is specific to the present study that the role of personality traits on disclosure behavior has been obtained separately based on different disclosure situations. Accordingly, the dominant personality traits of each consumer are one of the reasons why they behave differently in different information disclosure conditions. Besides, privacy concern is a significant intermediary consumer characteristic in the formation of these effects.

The findings of this study related to the role of personality traits on privacy concern are consistent with the various studies in the literature (Korzaan & Boswell, 2008; Bansal et al., 2010; Pentina et al., 2016; Bansal et al., 2016). Unlike other studies, it was found that: (1) privacy concern has different effects on the different types of disclosure behavior, and (2) privacy concern has an intermediary role in the formation of the indirect effects of personality traits on disclosure behavior.

In the previous studies, information disclosure has often been measured based on future intentions (e.g., Benson et al., 2015), and the evaluations between the types of personal information and the information disclosure have often been carried out in single disclosure situation (e.g., Shibchurn & Yan, 2015). In the present study, the disclosure behavior has been measured based on the past behavior instead of future intentions. In other words, consumers' disclosure behaviors from the past to the present have been evaluated within the scope of the study. Moreover, the evaluations were done to cover different disclosure situations and different types of information. Thus, it has been possible to compare consumers' information disclosure behaviors based on various types of personal information in case of different disclosure situations.

Limitations and Suggestions for Further Research

The scope of the study was limited with consumers living in Turkey and using social media. The types of personal information was also limited to specific information and determined by reviewing studies in the literature and by considering the level of sensitivity of the information. Additionally, the disclosure behavior was investigated according to two situations: (1) disclosure of information to companies and (2) self-disclosure in social media. However, it is possible to disclose personal information in different situations and types. For future researches, it is suggested that the approach should be expanded and repeated by considering different types of personal information, different disclosure situation, and various population including the different socio-economic groups and generations.

In this study, consumers' disclosure behaviors include their various information disclosures made in the past, and were measured by their self-assessment. However, depending on the potential motivators, the situational disclosure behaviors may differ. Therefore, for a deeper understanding of consumers' information disclosure behaviors, it is recommended to investigate these behaviors by experimental studies designed by including various benefits and risks, especially some motivator benefits (reward, convenience, personalization, etc.).

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