DO THE EFFECTS OF BRAND PERSONALITY DIMENSIONS ON BRAND LOYALTY CHANGE ACCORDING TO CONSUMERS' PERSONALITIES?

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ABSTRACT

JEL Codes:

M3, M30, M31

Mobile phones, especially the smart ones are becoming a main need for millions of people from all ages. Producers pay attention to develop a repeat purchasing behavior among their customers, aiming to resale their updated models. Brands play an important role in facilitating and affecting customer's choice process, especially for high-technology products. Brand loyalty concerns the behavior of rebuying and at the same time, the antecedents causing that actual behavior. This study aims to study the relationships between consumer personality, brand personality and brand loyalty with data collected from 394 participants by two questionnaires (for Samsung and Apple) using convenience sampling method. Questionnaires are designed by using CAD scale of Cohen (1967), brand personality scale of Aaker (1997) and brand loyalty scale of Chaudhuri and Holbrook (2001). Four groups of hypotheses were tested with regression analyses and one group by comparing means. Findings include statistically significant results.

Keywords: Brand Personality, Brand Loyalty, Consumer Personalities

TÜKETİCİ KİŞİLİKLERİNE GÖRE MARKA KİŞİLİĞİ BOYUTLARININ MARKA SADAKATİ DEĞİŞİMİ ÜZERİNDE ETKİSİ VAR MIDIR?

ÖZ

JEL Kodu:

M3, M30, M31

Cep telefonları, özellikle akıllı olanlar her yaştan milyonlarca insan için temel bir ihtiyaç haline gelmektedir. Üreticiler, müşterileri arasında tekrar satın alma davranışı geliştirmeye önem vermekte, güncellenmiş modelleri yeniden satmayı amaçlamaktadır. Markalar, özellikle yüksek teknolojili ürünler için müşterinin seçim sürecini kolaylaştırma ve etkilemede önemli bir rol oynamaktadır. Marka sadakati, yeniden satın alma davranışını ve aynı zamanda gerçek davranışlara neden olan deneyimleri de içermektedir. Bu çalışma, kolayda örnekleme yöntemi kullanılarak 394 katılımcıdan toplanan verilerle (Samsung ve Apple için yapılan iki anket formu ile); tüketici kişiliği, marka kişiliği ve marka sadakati arasındaki ilişkileri incelemeyi amaçlamaktadır. Anketler, Cohen'in (1967) CAD ölçeği, Aaker'ın marka kişilik ölçeği (1997) ve Chaudhuri ve Holbrook (2001) marka sadakat ölçeği kullanılarak tasarlanmıştır. Dört hipotez grubu regresyon analizleri ile ve bir grup da ortalamaları karşılaştırılarak test edilmiştir. Bulgular istatistiksel olarak anlamlı sonuçlar içermektedir.

Anahtar Kelimeler: Marka Kişiliği, Marka Sadakati, Tüketici Kişilikleri

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1.   INTRODUCTION

Two mega trends in 21st century are shaped around mobility and connectivity. These concepts are widening their scope more and more every day, by becoming a main need for millions of people from different ages. Mobile phones, especially the smart ones, play an important role in satisfying this demand, increasingly. For example, in Turkey, the ratio of mobile phone subscribers' number to total population has increased from 22% to 94% between 2000 and 2016 (TUIK, 2017). Nowadays, people use their smart phones not only to satisfy their mobile communication needs, but also treat them as a personal assistant or playmate as well (Fullwood et al., 2017:347). Moreover, they tend to choose their favorite brands despite their objective considerations when purchasing a smartphone (Liu and Liang, 2014:338). Therefore, perceived brand personality and shown brand loyalty are expected to be very important issues for smartphone producers in providing repetitive sales to customers during model updates.

Brands play an important role in facilitating and affecting customer's choice process. Individuals are usually in search for useful short-cuts in decision-making. These short-cuts mostly rely on habits, but can also be based upon perceptions about brand images. Such perceptions may be affected not only from advertising, distinguished distribution and public relations; but also from cultural, social and personality factors as well. Brands, which create this image or "personality", are successful (Doyle, 1990:79).

Mobile smartphones, which are in our concern for this study, are well-known examples of high-technology products. Branding is an important issue in this group, because customers, regardless of being early or late adopter, favorably choose existing brands (vs. new) on innovative high-technology products (Truong et al., 2017:85). Lin (2010:13) has studied the connections between personal traits, brand loyalty and brand personality, and found significantly positive relations between personal traits and brand personalities; and also found significantly positive influences of brand personalities and personal traits on brand loyalty.

2.   LITERATURE REVIEW

2.1.   Personality Traits

People are in search of a possibility for the generalization of personal characteristics for a long time. Starting from ancient times, there are many studies on personality, and since 1920's, their various industrial applications have been popularly investigated. Psychologists,

working on personality, mostly agree on the categorization of personality by five traits. Several studies by different analysis methods showed that, the "Big Five" traits describe the main dimensions of personal variation at a very broad level of abstraction (John, Naumann, and Soto, 2008; McCrae and Costa, 2008). Personality dimensions can be represented by five factors: agreeableness, extraversion, conscientiousness, neuroticism and openness (Costa and McCrae, 1992; McCrae and John, 1992; John and Srivastava, 1999).

"Extraversion" is the tendency to be active, sociable, cheerful, assertive, upbeat, talkative and optimistic. Extravert individuals prefer groups, like people, experience positive effects such as excitement, zeal and energy. "Agreeableness" represents the tendency to be caring, trusting, compliant, considerate, gentle and generous. Agreeable individuals are sanguine about human nature. "Conscientiousness" describes individuals that are determined and purposeful, aiming for achievement against an outside expectation or measure and has the tendency to show self-discipline and act dutifully. Individuals with the tendency to experience guilt, anger, sadness, nervousness, tension and fear are at high end of "neuroticism". On the contrary, emotionally stable and even-tempered people score at the low end. "Openness to experience" is the propensity of the individual to be sensitive, original in thinking, imaginative, watching over inner feelings, intellectually curious, sensitive to beauty and appreciative of art. Such individuals welcome new ideas and unconventional values (Costa and McCrae, 1992; John and Srivastava, 1999).

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Another widely used grouping for personality was constructed by Karen Horney and measured via the scale developed by Cohen (1967:270). Cohen's work indicates that this typology may have some relevance to marketing (Kassarjian, 1971:410). In this approach, people can be placed into three types according to their predominant response to others, namely "Compliant", "Aggressive" and "Detached".

"Compliant people wish to be loved, wanted, appreciated and needed" (Cohen, 1967:270). This category is similar to extraversion and agreeableness types of big-five model.

Aggressive oriented people are competitive, achievement-oriented, seeking for power, success, prestige and admiration, self-motivated and restrained (Cohen, 1967:270). This category is similar to conscientiousness and neuroticism of big-five model.

Detached people usually put emotional distance between themselves and others. Independence, self-sufficiency, freedom are highly valued and they don't want to be influenced by others, thinking themselves as unique and want to be recognized without any

effort to show their abilities (Cohen, 1967:270). This category is similar to openness to experience of big-five model.

According to the study of Aydın et al. (2014:680), word of mouth communication, which is used for providing brand loyalty by affecting purchasing behavior of consumers, and compliant personality type have a positive relationship.

2.2.   Brand Personality

As Aaker (1997:347) had put it, brand personality is defined as "a set of human characteristics associated with a brand". Research made prior to Aaker's scale has suggested that a brand is preferred more, if the human characteristic describing one's self and that brand are compatible (e.g. Malhotra, 1988:4; Sirgy, 1982:288). By using big-five human personality structure, Aaker (1997) developed a "brand personality scale," with five dimensions: sophistication, sincerity, excitement, competence and ruggedness, inducing 15 facets and 42 traits. This scale is widely used despite its critics about its loose definition of brand personality, which is caused by characteristics like age, gender, category confusion; the vulnerability of the factor structure for generalization in analyses at the respondent level (for a specific brand or within a specific product category); non-replicable results for five factors cross-culturally (Geuens, 2009:97; Avis, 2012:91, Caprara et al., 2001:377). Aaker herself has made some extensions to overcome the cultural problems of the scale (Aaker et al., 2001), and there are also other studies trying to tailor the scale culturally (Ferrandi et al., 2015; Bosnjak et al., 2007   Milas and Mlacic , 2007; Smit et al., 2002; Sung and Tinkham, 2005). But still, a vast majority of the brand personality studies verify Aaker's scale.

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Brand personality has been investigated many times for the factors influencing its perception in previous research. These factors are either product or brand characteristics (Maehle et al., 2011), marketing and experiential factors (Liao et al., 2017) or consumer characteristics (Lin, 2010). In this study, our concern is on the possible differences between brand personality perceptions of consumers according to their personal characteristics.

Kotler and Keller (2003) pointed out to the tendency of customers, choosing the brands, which are in accordance to their self-image. Consumers want to select a brand based on their ideal or social self-image. Thus, brand personality may play an important role for product choice, which is in accordance with his/her personality. Huang (2009) aimed to investigate the potential effects of feeling and involvement on the relationship between brand personality, consumer personality and brand relationship on the basis of the self-identity and

has found that his respondents were using symbolic meanings of the brands to reflect their self-identities by linking consumer personality and brand personality. Lin (2010) has found significantly positive relationships between consumer personality traits and brand personalities respectively: Extroversion and agreeableness with excitement, agreeableness with sincerity and competence.

2.3. Brand Loyalty

Before explaining the details of brand loyalty, it is necessary to define the concepts of satisfaction and loyalty that many scientists have been focusing on for many years. Oliver (1999) mentioned that the definitions of these concepts are still in progress and researchers try to find out what processes do consumers have, to become satisfied and/or loyal. Oliver (1997) defined brand loyalty as "a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts that have the potential to cause switching behavior".

According to the study of Oliver (1997), satisfaction is a pleasurable fulfillment. The sensation of fulfillment for some need, goal, desire and so forth by consumption, drives a pleasure in consumer. Thus, "satisfaction is the consumer's sense that consumption provides outcomes against a standard of pleasure versus displeasure". Moreover, Oliver (1997:392) made a description of the consumer as "who fervently desires to rebuy a product or service and will have no other." At still another level, he supposes a consumer who will pursue this disquisition "against all odds and at all costs."

There are several studies focusing on the relationship between brand loyalty and consumer satisfaction. According to Bloemar and Kasper (1995), most of them did not take into account the difference between "repeat purchasing behavior and brand loyalty on the one hand and spurious and true brand loyalty on the other hand". Bloemer and Kasper (1995) mentioned the necessity to differentiate between repeat purchasing behavior, which represents the actual rebuying of a brand regardless from the consumer's degree of commitment to the brand and brand loyalty, which concerns not only the behavior of rebuying, but also that actual behavior's antecedents as well. As a result, Bloemer and Kasper (1995) identified two distinct types of brand loyalty: spurious and true.

There are two different approaches in understanding loyalty: the attitudinal approach that considers loyalty as an attitude, and the stochastic approach, which is purely behavioral.

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(Odin et al, 2001) The concept of brand loyalty is associated with a set of six essential and jointly adequate conditions in a study of Jacoby and Kyner (1973) and brand loyalty is (1) behavioral response (i.e., purchase), (2) biased (i.e., non-random), (3) expressed over time, (4) by some decision making unit, (5) with respect to one or more alternative brand out of a set of such brands, and (6) is a function of psychological (decision-making, evaluative) processes.

Dick and Basu (1994) declared a four-category classification for customer loyalty: 1-No loyalty, 2-Spurious loyalty, 3-Latent loyalty, 4-True loyalty.

The long-term success of a brand is based on the number of consumers who became regular buyers of the brand, not the number of the ones that buy it once (Jacoby and Chestnut, 1978:1). This statement exhibits the importance for companies to put the emphasis on their customers' loyalty. (Odin et al, 2001) Also, Chaudhuri and Holbrook (2001) showed two aspects of brand loyalty: attitudinal loyalty and purchase loyalty. Their findings indicate that attitudinal loyalty leads to a higher relative price for the brand, and purchase loyalty, in turn, leads to greater market share. Chaudhuri and Holbrook (2001) also developed scale of a seven point Likert, utilizing affective loyalty and action loyalty to measure brand loyalty.

2.4. Personal Trait's Effect on Brand Loyalty

The harmony between self-image and brand personality increases consumer-brand relationship quality and brand loyalty increases via this relationship especially in high involvement products (Park and Lee, 2005:39). Fournier (1998:343) also studied the relational phenomena in the consumer products by means of brand on three in-depth cases and argued the potential application of her findings on brand personality and brand loyalty domain. Fournier (1998:343) found evidence on the validity of a relationship at the level of consumers' previous experiences with their brands. Wu and Lin (2016:188) investigated the effects of personality driven factors on brand loyalty with the mediating effect of "susceptibility to personality congruence (SPC)", among smartphone users and have found perceived value and SPC can be considered as critical for brand loyalty. In their research about the determinants of brand loyalty from consumer-brand identification and consumer value perspectives upon smartphone industry, Yeh et al (2016:255) have found emotional value having the strongest effect on brand loyalty, and this effect is increasing with age. Lin (2010:13) has studied the connections between personal traits, brand loyalty and brand personality, and has found openness and agreeableness personality traits have a positive effect on both action and affective loyalty.

Compliant personality type of Horney resembles the extraversion and agreeableness traits, and detached type resembles to the openness to experience traits of the big five model. Therefore, Yeh et al. (2016:255)'s findings about emotional value having the strongest effect on brand loyalty may result as a negative effect for detached types, which are prone to put emotional distance between themselves and others; but this may also be the opposite, according to Lin (2010)'s findings on openness. Lin (2010) has found a positive effect of agreeableness on brand loyalty, which makes us think that compliant consumers are more likely to be loyal to the brand. Thus, the following hypotheses have been developed.

H1.1: For brand personality, there is a significant difference between compliant, aggressive and detached personality types.

H1.2: For brand loyalty, there is a significant difference between compliant, aggressive and detached personality types.

2.5. The Effect of Brand Personality on Brand Loyalty

There are studies investigating direct or mediating effects of brand personality on brand loyalty (Kim et al. 2001; Kwong and Candinegara, 2014; Kumar et al., 2006; Teimouri et al., 2016; Chung and Park, 2017). For example, Kim et al. (2001) has found the attractiveness of the brand personality directly affects positive word-of- mouth reports and then indirectly affects brand loyalty. Chung and Park (2017) investigated the influence of brand personality on consumer loyalty and the moderating role of relative brand identification for multiple brands in the mobile phone industry with a survey data from respondents in the United Kingdom, France, and Germany. They found that there are positive effects of dimensions of brand personality on consumer brand loyalty and this varies across brands in the mobile phone category. Lin (2010) showed competence and sophistication brand personalities have a positive effect on both affective and action loyalties, and peacefulness on action loyalty. Park and Lee (2005) examined how the congruence between brand personality and self-image affect brand loyalty, also investigating mediating effects of consumer-brand relationship and consumer satisfaction. Khani et al. (2013) showed that personality traits and adoption of brand personality improve attitude and behavioural loyalty brand and brand equity. Teimouri et al (2016), found a significant relationship among customer loyalty and brand personality dimensions, in their case study among Samsung Mobile Phone customers.

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The following groups of hypotheses have been developed to investigate brand personality's possible effects on brand loyalty among three different consumer typologies (n=1 to 5, representing the five dimensions of brand personality).

H2.n: Brand personality has a significant influence on brand loyalty. (H2.a.n Hypotheses examined for Apple brand, H2.s.n Hypotheses examined for Samsung brand)

H3.n: For compliant consumers, brand personality has a significant influence on brand loyalty. (H3.a.n Hypotheses examined for Apple brand, H3.s.n Hypotheses examined for Samsung brand)

H4.n: For aggressive consumers, brand personality has a significant influence on brand loyalty. (H4.a.n Hypotheses examined for Apple brand, H4.s.n Hypotheses examined for Samsung brand)

H5.n: For detached consumers, brand personality has a significant influence on brand loyalty. (H5.a.n Hypotheses examined for Apple brand, H5.s.n Hypotheses examined for Samsung brand)

2.6. A Short View on Mobile Phone Industry

Mobile phone industry is experiencing a growth pace worldwide. In Turkey, 12,5 million smartphones sold in 2016 (GFK, 2016). According to 2016 2nd Quarter Market Shares (IDC, 2016), Samsung and iPhone dominates the market with 77 million and 40,4 million shipment volumes respectively. These two brands represent the %34,2 of the total market, followed by Huawei from China.

Liu and Liang (2014) studied the factors on the customers' decision making to buy a smartphone, especially the effects of brand, by internet survey and eye-movement data. They observed that buying decisions are mostly based on the exterior specifications of the smartphone, model, main display resolution, and price. But more than half of the participants desired to view their favorite brand logo at first and then compared the specifications. They concluded on the importance of brand loyalty on smartphone purchase decision, and amount of sales mostly depending on brand. Moreover, Truong et al. (2017) have found that high-technology product customers, regardless of being early or late adopter, favorably choose existing brands (vs. new) on innovative high-technology products. Therefore, it is not inappropriate to claim branding as a very important issue for mobile phone industry.

Khani et al. (2013) studied the customer personality and brand personality adoption and their effects on attitudinal and behavioral loyalty among Samsung mobile phone customers in Tehran. They have found that the adoption of the two traits improve brand equity and loyalty. Ekhlassi et al. (2012) also studied the cell phone market in Tehran and questioned the relationships between gender, customer personalities, income level and brand personality. Their results showed that customer personalities (agreeableness, conscientiousness and extroversion) and brand personalities (responsibility, activity and adventurousness) are positively related.

Sata M. (2013:111) studied the underlying factors affecting the decision to purchase mobile phone devices. He found price as the dominant factor and secondly, the features incorporated in a mobile hand set in purchasing decisions. He found brand name and durability of mobile phones, equally and moderately correlated with the decision; and after sales service and social influences as the least correlated factors. Petruzzellis, (2008:610) showed various dimensions related to consumer decision process for technological products. Brand attitudes and consumer intention to purchase mobile phones are positively related.

Akın (2011: 199) has found competence and excitement dimensions affecting consumers' behavioral intentions than any other factors. He concluded that competence and excitement dimensions are better on transforming Turkish consumers' perceptions of cell phone brand personality into buying intention than those of androgenic and traditionalist dimensions.

Dissanayake and Amarasuriya (2015:438) evaluated the iPhone and Samsung brand identities and indicated that they have been successfully created brand images. To earn the brand superlative profits, iPhone takes position the in the high-end, and Galaxy range to the masses making it a revenue driver for Samsung. In creating a niche, iPhone uses culture, personality, self- image and reflection and Samsung uses compelling functional benefits to link the brand to.

Nooradi and Sadeghi (2015:843) investigated the relationship of personality traits with the market performance of Samsung mobile phones and have found a positive correlation between brand performance and extroversion and conscientiousness traits. They also found negative correlations between neuroticism personality, extroversion, age, openness to experience and loyalty to Samsung brand and positive relationships between the level of income, agreeableness and loyalty.
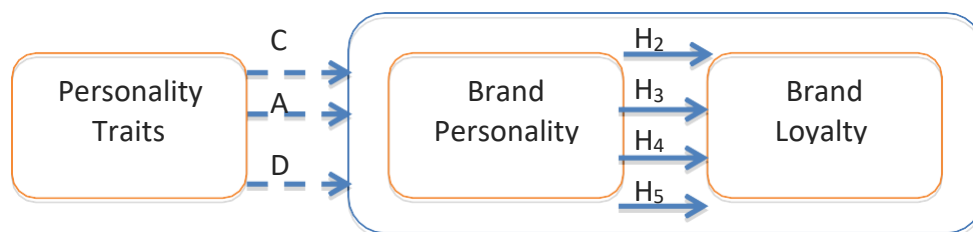
3. METHODOLOGY

3.1. Aim of the Study

This research aims to study the relationships between a person's interpersonal orientations, his/her perception of brand personality and brand loyalty.

Inspired by the studies and hypotheses mentioned in the literature review, conceptual model of this study has built as shown in figure 1.

Figure 1: Conceptual Model of the Study

3.2. Measurement of Constructs

The survey was conducted by two questionnaires (for Samsung and Apple), which are composed of three well-known scales. Cohen's CAD scale (Cohen, 1967) has been used to measure personality traits, Aaker's Brand personality scale (1997) has been used to measure brand personality and brand loyalty has been measured via the scale developed by Chaudhuri and Holbrook (2001). Brands were chosen according to their positions of being the first (Samsung 22,4%) and second (Apple 11,8%) in 2016 2nd Quarter Market Shares (IDC, 2016).

The Compliant, Aggressive and Detached (CAD) personal orientations are proposed by Karen Horney (1945) to classify personality traits. These orientations are measured via a 35-item, 6 point Likert-type instrument developed by Cohen (1967). This study refers to this scale to group survey respondents to investigate a possible difference in the relationship between brand loyalty and brand personality among these orientations. A modification has been made by using 5-point, to provide a consistency between the three scales.

There are five dimensions in Aaker's brand personality model: "Sincerity, Excitement, Competence, Sophistication and Ruggedness". It is a 42-item, 5 point Likert-type instrument to measure brand personality and a vast majority of the brand personality studies verify Aaker's scale. Therefore, it is preferred to measure brand personality in this study.

Chaudhuri and Holbrook (2001) investigated three dimensions to measure brand loyalty: brand trust (4-item), brand affect (3-item) and purchase loyalty (4-item). Chaudhuri

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and Holbrook (2001) also developed a scale of a seven-point Likert, utilizing affective loyalty and action loyalty to measure brand loyalty. This scale is used in this study to measure brand loyalty with a modification of using 5 points for consistency.

Two questionnaires (Apple-Samsung) composed of nine parts were used to collect data. The scales were translated into Turkish by the researchers and checked by their associate professor in Marketing, for errors. The first two questions consisted of a nominal scale to find out whether the respondent uses the telephone or any other products of the brands, and the demographic questions (last four) were gender, age, education and monthly income. Total number of the items in the survey was 94 (2+35+42+11+4), and there were no negative statements that required any reverse coding.

3.3. Sample and Data Collection

Data has been collected by these questionnaires that have been distributed via internet and hardcopy drop-off (in İstanbul and ocaeli) between 21st November and 8th December 2017. Because of the limitations on cost, convenience sampling method was used. A total of 394 responds has been collected (web: 219, hardcopy: 175). SPSS 25.0 program is used for analyses based on a confidence interval of 95%.

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3.4. Findings

The research process consisted of three steps: determining respondent profiles, checking for reliability and validity, and analyzing the data for descriptive statistics, exploratory factor, variances and regression.

3.4.1. Respondent Profile

The total sample consists mainly of females (60,7%), with ages between 18-31 (67,2%) who are graduates and undergraduates (68,6%), with an income level above 3000 TL (39,6%), as may be seen from Table 1. The demographic profiles for each brand (Apple and Samsung) are also presented in Table 1.

Table 1: Respondent Profile

Demographic Characteristics	Total (N=394)		Apple (N:257)		Samsung (N:137)	
	Freq.	Valid%	Freq.	Valid%	Freq.	Valid%
Gender						
Female	239	60,7	164	63,8	75	54,7
Male	150	38,1	88	34,2	62	45,3
Empty	5	1,2	5	2	0	0

Age						
1-17	14	3,6	6	2,3	8	5,9
18-24	176	44,8	127	49,4	49	36,0
25-31	88	22,4	55	21,4	33	24,3
32-44	80	20,4	53	20,6	27	19,9
45+	24	6,1	5	1,9	19	14,0
Empty	12	3,0	11	4,3	1	0,8
Education Level						
Primary School	14	3,6	5	1,9	9	6,6
High School	101	25,6	65	25,3	36	26,3
Undergrad.	172	43,7	125	48,6	47	34,3
Grad./PHD	98	24,9	55	21,4	43	31,4
Empty	9	2,3	7	2,7	2	1,5
Income (TL)						
Below 500	71	18,0	46	17,9	25	18,2
501-1000	47	11,9	34	13,2	13	9,5
1001-2000	52	13,2	38	14,8	14	10,2
2001-3000	46	11,7	26	10,1	20	14,6
3001-4000	40	10,2	25	9,7	15	10,9
4001 +	116	29,4	72	28,0	44	32,1
Empty	22	5,6	16	6,2	6	4,4

* Min age: 10, Max Age: 71; 11 empty.

3.4.2. Descriptive Statistics

The descriptive statistics (mean scores and standard deviations) for the 42-item brand personality scale were examined (Appendix 1).

Technical (Mean=4,00, std.=1,222) and corporate (Mean=3,92, std.=1,193) brand personality adjectives have the highest mean values for the total sample. When brands are analyzed separately, it may be seen that for Apple, the brand personality adjectives with the highest mean values are also technical (Mean= 4,12, std.=1,191) and corporate (Mean=4,07, std.=1,198); and for Samsung, they are technical (Mean=3,78, std.=1,252) and up-to-date (Mean=3,75, std.=1,103).

3.4.3. Reliability Analysis

To test the reliability for the three scales, Cronbach's Alpha values were calculated separately. This value for 35-item CAD scale was 0,801; for 42-item brand personality scale it was 0,971 and for 11-item brand loyalty scale, it was 0,961. Nunnaly and Bernstein (1994) recommended a cutoff point of 0,70 for internal consistency estimates. As the Cronbach's Alphas of all three scales are above this threshold, so it can be concluded that all of them are reliable. For the 42-item brand personality scale, factor analysis was conducted and resulted in a total of five factors after varimax with Kaiser normalization rotation. Sampling adequacy

was suitable for conducting Exploratory Factor Analysis, according to the Kaiser-Meyer Olkin (KMO) results (KMO=0,969 χ2=12653,57, df=861; p=0.000).

3.4.4. Exploratory Factor Analysis (EFA) for Brand Personality Scale

The final five-factor structure consisted of 42 items with total variance extraction of 63,881%. The factors were labeled as F1: Sophistication, F2: Sincerity, F3: Excitement, F4: Competence, F5: Androgen. Factor loadings and their corresponding factors for the items are presented in Appendix 1. The mean values and standard deviations of the five dimensions of brand personality and brand loyalty were analyzed for total data and for each personality type (Table 2).

Table 2: Mean Scores and Differences for the Three Personality Types

	Total		Compliant		Aggressive		Detached		One - Way ANOVA
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	F value
Sophistication	3,74	0,978	3,76	0,897	3,63	1,089	3,71	1,187	0,32
Sincerity	3,42	1,026	3,49	0,945	3,25	1,050	3,24	1,251	2,416
Excitement	3,37	0,957	3,42	0,892	3,21	0,960	3,28	1,157	1,166
Competence	3,38	0,998	3,46	0,943	3,09	1,042	3,24	1,134	3,184*
Androgen	2,48	0,841	2,54	0,784	2,43	1,083	2,31	0,899	2,369
Brand Loyalty	3,45	1,140	3,55	1,019	3,07	1,407	3,27	1,353	4,059*

*p<0,05

The major brand personality characteristic identified by all personality types is sophistication, according to the mean scores (F1). There existed some differences in the dimensions with second highest mean scores for each personality type. For compliant types and aggressive types, the next brand personality characteristic is sincerity (F2); and for detached types, it is excitement (F3). In order to test whether there is a statistically significant difference between the three types of personality by means of brand personality, One-Way ANOVA was conducted. Except for one dimension, (F4: Competence; p=0,043), there are no statistically significant differences for four dimensions of brand personality and p-value for competence is near to the border of the rejection region. It is hard to conclude to reject the null hypothesis, thus, H1.1 is rejected.

The highest mean for brand loyalty is in compliant type and this difference between the CAD groups is statistically significant according to the one-way ANOVA results. Thus, H1.2 is accepted.

3.4.5. The Effects of Brand Personality Dimensions on Brand Loyalty

To investigate the possible effects of brand personality on brand loyalty, regression analyses were conducted first on all data and then by splitting the data according to personality types. The results are given in Table 3 (All data) and Table 4 (Data splitted according to CAD).

Table 3: Results of Multiple Regression Analysis (Total, Dependent Variable: Overall Loyalty Score)

	Total	Apple	Samsung
	Beta (β)	Beta (β)	Beta (β)
(Constant)	0,454*	0,509*	0,504
Sophistication	0,229*	0,119	0,301*
Sincerity	0,283*	0,275*	0,368*
Excitement	0,016	0,177	-0,341*
Competence	0,343*	0,361*	0,338*
Androgen	-0,019	-0,061	0,139
Adjusted R²	0,452	0,465	0,438

*p<0,05

Table 4: Results of Multiple Regression Analysis (Splitted: C-Compliant, A-Aggressive, D-

	Total			Apple			Samsung		
	C	A	D	C	A	D	C	A	D
	Beta (β)	Beta (β)	Beta (β)	Beta (β)	Beta (β)	Beta (β)	Beta (β)	Beta (β)	Beta (β)
(Constant)	0,424	0,316	0,569	0,505	0,722	0,396	0,543	-0,435	1,657*
Sophistication	0,213*	0,238	0,228	0,075	-0,053	0,285	0,362*	0,565	-0,188
Sincerity	0,250*	0,479	0,302	0,357*	0,236	0,124	0,149	0,570	0,495*
Excitement	0,168	-0,694*	-0,039	0,334*	-0,461	0,013	-0,305	-0,451	0,169
Competence	0,216*	0,758*	0,413*	0,161	1,163*	0,480	0,333*	0,291	0,241
Androgen	0,050	0,089	-0,146	-0,023	-0,115	-0,058	0,308*	0,021	-0,409
Adjusted R²	0,465	0,507	0,404	0,510	0,436	0,418	0,470	0,593	0,360

Detached; Dependent Variable: Overall Loyalty Score)

*p<0,05

As it can be seen in Table 3, sincerity and competence dimensions of brand personality have a significant effect on loyalty for both brands in concern. Moreover, sophistication dimension has a significant positive effect on loyalty for Samsung. A significant negative effect of excitement dimension on loyalty is observed for Samsung. Thus, hypotheses H2.1, H2.2, H2.4, H2.a.2, H2.a.4, H2.s.1, H2.s.2, H2.s.3, H2.s.4 are accepted.

Regression analyses were repeated by splitting the data into the CAD personality types (Table 4). Analyzed by all data (both Apple and Samsung), according to compliant

consumers; sophistication, sincerity and competence dimensions of brand personality have significant positive effects on brand loyalty. According to aggressive consumers; competence has significant positive and excitement has negative effects on brand loyalty. According to detached consumers; competence has a significant positive effect on brand loyalty. Thus, hypotheses H3.1, H3.2, H3.4, H4.3, H4.4 and H5.4 are accepted.

When phone brands were analyzed separately, among compliant consumers; sophistication, competence and androgen dimensions of brand personality have significant positive effects on brand loyalty for Samsung brand, and sincerity and excitement dimensions have significant positive effects on brand loyalty for Apple brand. According to aggressive consumers, competence dimension of brand personality has a significant and strong positive effect on brand loyalty for Apple brand. And for detached consumers; sincerity has a significant positive effect on brand loyalty for Samsung brand. Thus, hypotheses H3.a.2, H3.a.3, H3.s.1, H3.s.4, H3.s.5, H4.a.4, H5.s.2 are accepted.

4. DISCUSSION

This study investigated the relations between brand loyalty and brand personality among personality traits for Apple and Samsung phone users. The aim of the study was to find out if there existed any correlations between the brand personality and brand loyalty, and whether if these correlations vary according to the personality traits of Apple and Samsung consumers.

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The demographic characteristics of the sample, consists mainly of females (60,7%), with ages between 18-31 (67,2%) who are graduates and undergraduates (68,6%), with an income level above 3000 TL (39,6%) and 65% of the respondents are iPhone users. Personality and individual differences of iPhone and Android users have been investigated in a recent study from UK (Shaw et al., 2016:727). Researchers have found that iPhone owners are more likely to be young, female and view their phones as a status object. Since the majority of the respondents in this study were iPhone users, demographic characteristics are in accordance with these findings of being female and young.

The three scales were subjected to reliability analysis and all Cronbach's Alphas were above the threshold of 0,7 (Nunnaly and Bernstein, 1994). The brand personality scale (Aaker, 1997) was subjected to exploratory factor analysis for dimensionality. For the smartphones, the brand personality dimensions were found to be sophistication, sincerity, excitement, competence and androgen. This dimensional structure is in accordance with

Aaker (1997) partially. The items in sophistication are glamorous, good looking, charming, corporate, upper class, cool, confident, western, leader, trendy, successful, contemporary, up-to-date, technical, intelligent, original, young, imaginative, unique, independent and Aaker (1997)'s items for sophistication were glamorous, upper class, charming, good looking, smooth, feminine. Four of the items are similar with the original scale and there are seven adjectives from excitement, five from competence, one from sincerity and one from ruggedness.

The items in sincerity are honest, sincere, real, down-to-earth, wholesome, family oriented and in the original scale they were family oriented, down-to-earth, honest, small-town, sincere, wholesome, real, cheerful, original, friendly and sentimental for sincerity dimension. All of the six items are in accordance with the original scale's sincerity dimension.

The items for excitement are friendly, exciting, spirited, sentimental, daring, cheerful, outdoorsy and that of Aaker's were trendy, daring, spirited, exciting, young, cool, unique, imaginative, independent, up-to-date and contemporary. There are three items in common with excitement, three items in common with sincerity and one item in common with ruggedness dimensions of the original scale.

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The items in competence are tough, rugged, reliable, smooth, secure, hard working and in the original scale these were reliable, secure, hard working, technical, intelligent, corporate, leader, confident and successful. Three items are in common with the competence dimension of Aaker's, two items with ruggedness and one with sophistication.

The items in androgen are masculine, small-town and feminine. The fifth dimension in Aaker (1997) was ruggedness, with items outdoorsy, masculine, western, tough and rugged. The term androgen is preferred mainly because of the adjectives masculine and feminine being together. Androgen refers to a concept that is used when it is not possible to define a brand as masculine or feminine (Aksoy ve Özsomer, 2007: 5). This finding represented an example of the criticism, done by Geuens (2009) to Aaker (1997) scale, which is caused by the characteristics like age, gender, and category confusion.

The major brand personality characteristic identified by all personality types is sophistication, according to the mean scores (F1). The brand personality adjectives with the highest mean values are technical, corporate and up-to-date. These adjectives belong to competence and excitement dimensions in the original scale. There is no statistically significant difference observed in brand personality perceptions between the three types of

personality. This finding is not in accordance with the findings of Lin (2010) about the positive relationships between consumer personality traits and brand personalities.

A statistically significant difference was found for brand loyalty between the CAD groups (the highest mean for brand loyalty in compliant type). This finding is compatible with the findings of Aydın et al. (2014:680) and Lin (2010).

Sincerity and competence dimensions of brand personality have a significant effect on loyalty for both brands in concern and this finding is in accordance with Chung and Park (2017)'s results on competence's influence on brand loyalty and also in accordance with Akın (2011:199) and Fettahlıoğlu (2015:219). We found a significant positive effect of sophistication dimension on loyalty and a significant negative effect of excitement dimension on loyalty for Samsung. This finding is in accordance with Chung and Park (2017) for sophistication and is opposite for the excitement dimension (they found a significant positive effect for Samsung and insignificant negative beta values for Apple).

Among compliant consumers; sophistication, competence and androgen dimensions of brand personality have significant positive effects on brand loyalty for Samsung brand. This is in accordance with the findings of Ekhlassi et al. (2012) on Samsung, which showed the positive relations between personalities (extroversion, conscientiousness and agreeableness) and brand personalities (adventurousness, activity and responsibility). It is also in accordance with the results of Nooradi and Sadeghi (2015:843), who found a positive relationship between agreeableness and loyalty to Samsung brand.

Sincerity and excitement dimensions have significant positive effects on brand loyalty for Apple brand. According to aggressive consumers, competence dimension of brand personality has a significant and strong positive effect on brand loyalty for Apple brand.

For detached consumers; sincerity has a significant positive effect on brand loyalty for Samsung brand. This finding is not in accordance with eimouri et al. (2016)'s finding on the relationship between sincere brand personality and extrovert and congruent personalities for Samsung.

5. CONCLUSION AND MANAGERIAL IMPLICATIONS

Consumers favorably choose existing brands on innovative high-tech products (Truong et al., 2017), therefore, brand loyalty has an important role on smartphone purchase decision (Liu and Liang, 2014), and brand personality perceptions affect brand loyalty. Brand loyalties mean score is higher for compliant personality type. Samsung may get an edge over

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compliant persons by positioning the brand personality as sophisticated, competent and androgen (these dimensions positively affect brand loyalty for compliant consumers of Samsung), which would be compatible with the strategy of Samsung to link the brand to compelling functional benefits (Dissanyake and Amasuriya, 2015:438).

Sincerity and competence dimensions of brand personality have a significant effect on loyalty for both brands, excitement dimension has positive effects for Apple and negative effects for Samsung (probably because of the "young" character of iPhone users and "old" character of Samsung users, as found in the study of Shaw et al. (2016:727)). Apple may get an edge over aggressive persons by positioning the brand personality as competent, exciting and sincere (these dimensions positively affect brand loyalty for Apple consumers), which would be compatible with the strategy of Apple in creating a niche by positioning in the high-end (Dissanyake and Amasuriya, 2015:438).

6. RESEARCH LIMITATIONS

This study has its limitations. Convenience sampling is used in this study as sampling method, so the results are valid for this sample and cannot be generalized to the whole population. Besides, only two brands were analyzed and respondents are recruited mainly in İstanbul and ocaeli. Studies on different, preferably random samples and using higher number of smartphone brands is encouraged for further research. It is also possible to design further studies using different scales for personality traits.

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Appendix 1: Mean Values, Standart Deviations, Factor Dimensions and Loadings

Brand Personality Scale Items	Total (N=394)		Apple (N:257)		Samsung (N:137)		Factor Dimension/ Loading
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	
Down-To- Earth	3,3452	1,29891	3,3619	1,34824	3,3139	1,20509	F2/0,696
Family Oriented	3,1751	1,34497	3,1829	1,40090	3,1606	1,23808	F2/0,569
Small-Town	1,9137	1,16901	1,7004	1,03064	2,3139	1,30470	F5/0,542
Honest	3,2716	1,28005	3,2296	1,34259	3,3504	1,15422	F2/0,769
Sincere	3,3680	1,26776	3,3230	1,29330	3,4526	1,21855	F2/0,759
Real	3,5787	1,29793	3,5642	1,35091	3,6058	1,19655	F2/0,739
Wholesome	3,7893	1,22891	3,8521	1,23488	3,6715	1,21334	F2/0,644
Original	3,8376	1,27772	4,0389	1,27416	3,4599	1,20058	F1/0,608
Cheerful	3,5406	1,19568	3,5875	1,21880	3,4526	1,15026	F3/0,548
Sentimental	2,9848	1,24372	2,9494	1,26914	3,0511	1,19633	F3/0,598
Friendly	3,4569	1,20407	3,4630	1,22139	3,4453	1,17523	F3/0,648
Daring	3,3680	1,32277	3,4747	1,33768	3,1679	1,27515	F3/0,575
Trendy	3,7157	1,30390	3,8988	1,27685	3,3723	1,28914	F1/0,672
Exciting	3,4873	1,19204	3,5486	1,21134	3,3723	1,15049	F3/0,643
Spirited	3,3376	1,20443	3,3891	1,22009	3,2409	1,17276	F3/0,619
Cool	3,7640	1,31060	4,0389	1,23049	3,2482	1,30486	F1/0,723
Young	3,8426	1,24202	3,9728	1,22922	3,5985	1,23348	F1/0,585
Imaginative	3,8173	1,24058	3,8677	1,25234	3,7226	1,21710	F1/0,578
Unique	3,0990	1,40983	3,2646	1,42523	2,7883	1,33080	F1/0,488
Up-To-Date	3,8731	1,17832	3,9377	1,21354	3,7518	1,10334	F1/0,633
Independent	3,5838	1,27786	3,6537	1,32018	3,4526	1,18800	F1/0,482
Contemporary	3,8477	1,19888	3,9844	1,17583	3,5912	1,20388	F1/0,658
Reliable	3,4594	1,36649	3,5331	1,41417	3,3212	1,26569	F3/0,633
Hard Working	3,7183	1,18915	3,7665	1,20220	3,6277	1,16321	F4/0,461
Secure	3,4975	1,33889	3,6109	1,37655	3,2847	1,24232	F4/0,521
Intelligent	3,8401	1,21161	3,9844	1,21182	3,5693	1,16818	F1/0,622
Technical	4,0025	1,22214	4,1206	1,19121	3,7810	1,25273	F1/0,623
Corporate	3,9188	1,19307	4,0739	1,19830	3,6277	1,13116	F1/0,740
Successful	3,9162	1,18969	4,0506	1,16650	3,6642	1,19606	F1/0,667
Leader	3,6980	1,33942	3,9183	1,32477	3,2847	1,27157	F1/0,687
Confident	3,7614	1,30137	3,9689	1,30467	3,3723	1,20664	F1/0,711
Upper Class	3,3832	1,34706	3,6226	1,34686	2,9343	1,23195	F1/0,730

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Brand Personality Scale Items	Total (N=394)		Apple (N:257)		Samsung (N:137)		Factor Dimension/ Loading
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	
Glamorous	3,6853	1,20746	3,7821	1,24027	3,5036	1,12540	F1/0,790
Good Looking	3,8426	1,18326	3,9494	1,21247	3,6423	1,10305	F1/0,748
Charming	3,7766	1,16822	3,9533	1,15149	3,4453	1,13059	F1/0,741
Feminine	2,7538	1,25716	2,7821	1,28056	2,7007	1,21489	F5/0,525
Smooth	3,0228	1,34863	3,1245	1,33466	2,8321	1,35890	F4/0,576
Outdoorsy	3,4162	1,26987	3,4591	1,30177	3,3358	1,20829	F3/0,499
Masculine	2,7741	1,20948	2,8016	1,23567	2,7226	1,16145	F5/0,563
Western	3,5482	1,33039	3,7315	1,32358	3,2044	1,27843	F1/0,706
Tough	3,4391	1,31447	3,5058	1,33499	3,3139	1,27043	F4/0,668
Rugged	3,1294	1,24422	3,1868	1,27634	3,0219	1,17865	F4/0,653