

Comprehending Behaviors of the Consumer in the Industry 4.0 Revolution: A Research on Smartphone Brands*

Endüstri 4.0 Devriminde Tüketici Davranışlarını Kavramak: Akıllı Telefon Markaları Üzerine Bir Araştırma

Derya ŞAHİN** Sevimece KARADOĞAN DORUK***

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ABSTRACT

Today, when technology transforms and changes in such a way, a great difference is observed in the behaviors of consumers. Each innovation that is experienced in the world of technology, leads to the transformation of consumers' perceptions to the same extent and this transformation is felt in every aspect of life. The revolution of Industry 4.0 that involves the life of consumers with its technological aspects, consists of the conglomeration of the innovations that are happened in the technological period and the adaptation of quite many new technologies to the industrial field in digital life. Based on all this information, the research seeks to reveal whether the external factors affecting the acceptance of augmented reality and artificial intelligence applications, show any alteration in the consumers using the different smartphone brands. For this purpose, the survey form, the reliability, and validity of which were ensured, was applied to 499 people. SPSS 21.0 and AMOS 22.0 packaged software were used in the analysis of the data gathered within the scope of this research. As a result of the analysis made, differences were observed in terms of the usages of smartphone brands discussed within the scope of this research by consumers in each variable of perceived ease of use, perceived benefit, perceived quality, intention to use, and usage behavior.

Keywords: Industry 4.0, Augmented Reality, Artificial Intelligence, Brand, Consumer Behavior.

ÖZ

Teknolojinin bu denli hızlı bir değişim ve dönüşüm yaşadığı günümüzde, tüketici davranışlarında da büyük farklılıkların yaşandığı gözlemlenmektedir. Teknoloji dünyasında yaşanan her bir yenilik, aynı doğrultuda tüketici algılarının da değişim yaşamasını sağlamakta ve bu değişim hayatın bütün alanında varlığını hissettirmektedir. Teknolojik unsurları ile tüketici hayatına dahil olan Endüstri 4.0 devrimi, teknolojik süreçte gerçekleşen yeniliklerin kavramsal bir çerçevede toplanmasını ve dijital dünyada pek çok yeni teknolojilerin de endüstriyel alana adapte edilmesini kapsamaktadır. Tüm bu bilgilere istinaden araştırma, artırılmış gerçeklik ve yapay zekâ uygulamalarının kabulünü etkileyen dışsal faktörlerin, farklı akıllı telefon markalarını kullanan tüketiciler üzerinde değişim gösterip göstermediği ortaya koymayı amaçlamaktadır. Bu amaç doğrultusunda güvenilirliği ve geçerliliği sağlanmış olan anket formu, 499 kişiye uygulanmıştır. Araştırma kapsamında toplanan verilerin analizinde, SPSS 21.0 ve AMOS 22.0 paket programları kullanılmıştır. Gerçekleştirilen analizler neticesinde; araştırma kapsamında ele alınan akıllı telefon markalarının, algılanan kullanım kolaylığı, algılanan fayda, algılanan kalite, kullanıma yönelik niyet ve kullanım davranış değişkenlerinden her birinde tüketicilerin kullanımları açısından farklılıklar olduğu tespit edilmiştir.

Anahtar kelime: Endüstri 4.0, Artırılmış Gerçeklik, Yapay Zeka, Marka, Tüketici Davranışları.

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Introduction

Industry 4.0, the last wave of technology, emerges as a process transforming the processes of production, consumption, and supply. It is expected Industry 4.0 process to have significant reflections in terms of customers and communication processes. Although there have been studies having been conducted towards the beginning of Industry 4.0 process in the world, Industry 4.0 components and possible changes and transformations that Industry 4.0 can generate in industrial processes, however, the comprehensive studies examining the effects or reflections of Industry 4.0 and its components on institutions, societies, consumers, and administration structure, etc., are very limited yet. Having experienced an increase in the technological applications targeting consumers today brings forth the issue of examining the variables which motivate consumers to embrace and use the new technologies.

The brands must be prepared for the competitive atmosphere in order to achieve success in the market. Therefore, it is highly crucial for brands to come up with innovations regularly in order to last their competitive superiority. Competition is based on innovation and sustainability. In terms of this, the process of Industry 4.0 with its all components makes the way open for all the brands. Today when we have been experiencing the Industry 4.0 period, the importance of this period has much more increased due to the factor of speed has become an important potential and thereby the innovation process to become commercialized. Just as reasoning can be controlled with logic, innovation can be controlled through commercializing as well. In this sense, commercializing does not only serve an economic purpose. Recognition of the products and services by the society which serves for is the indication of that (Günay & Çalık, 2019).

In light of this information, the period of Industry 4.0 puts forth an integrated industrial approach consisting of the conglomeration of many technological applications. Therefore, the period of Industry 4.0 has a great deal of importance for

the brands. Along with Industry 4.0, brands aim to affect consumers positively by both possessing much faster production power and reducing the possibility of risk. Brands can present new products and services based on the consumers' demands and needs thanks to the applications such as artificial intelligence, augmented reality, big data, the internet of things, cyber security, and cloud computing having been developed along with Industry 4.0 applications. Therefore, brands aim to create a positive impression on consumers' behaviors using these applications to both keep pace with the new revolution and build a successful image before the consumers.

Although many research exist examining the patterns of consumers' behaviors regarding technological innovations, no study was encountered examining the augmented reality and artificial intelligence applications, the components of Industry 4.0. This study sets out to reveal whether the external factors affecting the acceptance of augmented reality and artificial intelligence applications, show any alteration in the consumers using the different smartphone brands. Hence, this research has a unique aspect in that sense. For this purpose, the survey form, the reliability, and validity of which were ensured, was applied to the phone users and the data revealed were interpreted within the scope of this research's findings.

Industry 4.0

Industry 4.0 emerging as the last wave of globalization, caused a great deal of change in production, consumption, and supply processes. Unlike other predecessor revolutions, Industry 4.0 has not emerged as a result of a social, political, or economic boom. On the contrary of that, the advancements and developments happened in Industry 3.0 paved the way for this process. The beginning of this revolution is evident, but it is hard to predict when it will end.

Machines and production processes that do not need the workforce and function autonomously underlie the approach of Industry 4.0. It has become

possible for data to be transferred autonomously and scientification of data via remote sensing modules, automatic identification systems, and smart applications along with the advances that occurred as a result of the technology. Thanks to these applications, production processes have transformed into 'smart' and autonomous mechanisms (Görçün, 2017). Therefore, what differentiates the revolution of Industry 4.0 from previous revolutions essentially, comprises the interaction between digital, physical, and biological spaces (Schwab, 2016).

It is desired to form autonomous production processes by making production systems and factories smart with the revolution of Industry 4.0. It is focused on minimizing mistakes caused by people by excluding the workforce from the process as much as possible (Görçün, 2017).

Three important features of Industry 4.0 are highlighted. These essential features as such (Firat & Firat, 2017):

- 1. Speed:** This period does not develop in a linear way but in a much faster and more active way contrary to previous periods. The reason why is that new technologies constantly produce high-quality, smart products and services.
- 2. Scope and Depth:** This period builds on digital technologies and advances with unprecedented paradigms in social segments, business life, and individuals. The generation gap grows much more ever than before.
- 3. Effect of the System:** The period of Industry 4.0, develops in a network process in which many things can be interrelated with one another among all management computing systems.

Another important concept regarding technological transformations is the communication medium. For this reason, it is necessary to discuss the duty of interconnection of operational and cognitive processes in terms of the Telecommunications sector. It is considered that communication will be determinant in terms

of enabling machines to talk to one another and so for its quality and speed (Banger, 2018). The internet of things, one of the most components of Industry 4.0, can be demonstrated as a reflection of this circumstance. It is anticipated that things will get into action that will be helpful to ease the daily tasks of consumers by getting into contact with one another via the internet.

The technology comprises the front-end of Industry 4.0 which is expected to cause massive changes in business spaces. This new process emerged through the integration of operation and information technologies and has started to be used in many lines of business. The industry 4.0 period is not a characteristic that can be executed by an institution or corporation alone. Therefore, people comprising the economic system of commercial and industrial life, should collaborate and be cooperative in this matter. Such collaborations have been started to establish quite rapidly and effectively in advanced economies (Banger, 2018).

Ultimately, in light of these advances, Industry 4.0 which will influence all industries deeply, is seen to be just at the beginning of its life circle. It is quite important to conclude that businesses should adopt and execute the changes that emerged along with Industry 4.0 in the short run or they will fall behind the times and be out of the competition.

Industry 4.0 and Consumer Behavior

Consumer behavior comprises "the behaviors involving the processes regarding the disposal of products, services, selecting experiences or ideas, purchasing, using and post-use by individuals or groups." (İslamoğlu & Altunışık, 2008) The concept of consumer behavior is defined as the behavior pattern performed by consumers regarding their search for products and services that they expected, their purchase, use, evaluation, and disposal. Consumer behavior focuses on how individuals decide on spending their available sources for the components regarding consumption (time, money, effort). For this reason, this process includes the whole evaluation steps

correlated with the consumers' purchasing (Schiffman et al., 2012).

Consumer behavior analyzes the behaviors of market issues such as the purchasers and consumers of services and products. Analyzing the behavior patterns comprehensively and thoroughly manner enabling the mutual interest-focused relations between vendor and purchaser with the needs and demands of the customer to establish, underlies the main theme of the concept (Lepeyko et al., 2018). Consumer behavior contains a complicated and multi-dimensional process reflecting the total decisions of consumers regarding the purchase of commodity and services and their disposal.

Consumer behavior is an interdisciplinary concept. It is attributed to the concepts and theories by scientists and researchers in many disciplines such as psychology, sociology, social psychology, cultural anthropology, and economy. The main objective of the consumer behavior studies is to provide necessary information and skills to public relations specialists, advertisers, and marketers in order to conduct detailed consumer analyses which could be used to improve marketing strategies and understand markets. Hence, the research considering consumer behavior attempt to provide a great contribution to human thought understanding in general with its skills regarding the issue of natural mediums of the market (Barmola & Sirivastava, 2010).

The rapid advances in the technology world recently enabled consumer behavior to experience transformation and change along with it. Owing to the development of technology, it has been quite harder to control consumer behavior. The biggest reason for that is the emergence of a much more conscious consumer profile that is more selective and sophisticated with technological developments (Schiffman & Wisenblit, 2019). Besides, the emergence of the Industry 4.0 revolution, enabled the behaviors and intentions of consumers to become more comprehensible. Information, demands, and needs of consumers

can be analyzed correctly thanks to the components of Industry 4.0, stored, and used in consumer decision-making as well.

The majority of literature considering the Fourth Industrial Revolution (Industry 4.0), focuses on the technologically innovative nature of Industry 4.0. It would not be a quite accurate approach to regard the world changing and transforming with the Industry 4.0 revolution in terms of a uni-dimensional perspective. The most important segment that Industry 4.0 has affected is the consumers. In this sense, it should be focused on the effect of rapid growth in digitalization and technological developments on consumers, and technological innovations should be probed from a social point of view (Morrar & Arman, 2017).

The new generation of consumers does not seek products or services that will only satisfy their needs, demands, and desires. They desire a world where they can satisfy their values and creativities, be a part of products, join the products, and make interaction with the products (Jara, 2012). Thus, brands need to conduct operations that consider the request and needs of consumers.

Changing in consumers' demands today has necessitated the structure of products and services of brands to experience change and transformation based on the consumers' demands. Brands that are aware of the benefits that the components of Industry 4.0 provided have acquired awareness anymore on the necessity of using these components actively in order to affect the consumer who has consciousness. Thus, brands should remind the consumers' values while appealing to the demands of consumers (Gillpatrick, 2019). According to Teixeira and Piechota (2019), brands must realize the changes in consumers' demands and adapt new technological processes to their products and services. In this sense, brands that realize the nature of consumers' preferences and demands will carry their institutions one step ahead in the period of Industry 4.0. It is stated in the study by the World Economic Forum in 2017 that consumers

will have a key role in determining the future role of the Industry 4.0 period. In fact, when one of the most successful businessmen in the world, Jeff Bezos is considered, it appears that the source of his success is not just his usage of technical innovations but the way he has the consumers' demands reflect the new technologies smoothly.

The transition to the Industry 4.0 period, has helped many fields to renovate. Welcoming of these new technologies by consumers has helped the concept of Consumer to emerge. The definition of Consumer 4.0 consists of many factors in itself. Consumers not only look for products meeting their needs but also want to be part of the production along with their active participation. Therefore, consumers should share their experiences by joining the creation process of a product or service and getting into interaction, thereby, they should feel connected to the product (Martinez, 2016). So, brands do not present the products and services reflecting only their contributions and values in the operations that they have put on the market recently. In addition to this, they should develop a deep mutual establishment process based on both online and offline interaction with consumers. In this sense, the need for new theories is emphasized in order to make creation processes much more meaningful to the consumer in the studies conducted recently (Payne, 2008; Edwardson, 2011; Martinez, 2016).

Methodology

Objective and Method of the Research

The increase in the number of technological applications targeting consumers today brought up the issue of examining different variations that motivate consumers to use and accept new technologies. This study seeks to reveal the factors affecting the acceptance of artificial intelligence applications and augmented reality- one of the components of Industry 4.0- applications of smartphone brands that are among the pioneers of the technology sector and whether the external factors affecting the acceptance of augmented reality and artificial intelligence applications,

show any alteration on the consumers using the different smartphone brands.

Data of the research was obtained by the method of survey. The research method was conducted online due to the pandemic in our country and all around the world at the time that study is conducted. The convenience sampling method, one of the non-probability sampling methods, was preferred in context of research. The survey form that is prepared online was carried out on 499 people in total. The study was completed between 22.04.2021 and 31.05.2021 in 40 days total.

Model and Hypothesis of the Study

There are lots of studies in the literature (Davis, 1989; Venkatesh & Davis, 2000; Venkatesh et al., 2003; Masrom, 2007; Ramayay & Lo, 2007; Thomas & Veloutsou, 2011; Haugstvedt & Krogstie, 2012; Rese et., al 2014; Doğan et al., 2015; Huang & Liao, 2015; Şahin & Alkaya, 2017; Byun et al., 2018; Fedorko et al., 2018; Kalyoncuoğlu, 2018; Scholz & Duffy, 2018; Bilici & Özdemir, 2019; Ki-Bong & Gyu, 2019; Song, 2019; Deng & Yuan, 2020; Hajdu & Nagy, 2021) that use the technology acceptance model. While designing the model pattern, some other external factors have been added to the original Technology Acceptance Model. Within the scope of the study, it is focused on the effect of products and services which are presented by brands with Industry 4.0 on consumer behaviour; in addition to this, it is aimed to reveal the effect of intention to technology use on different brands. Therefore, perceived quality in brand equity has been added to the external factors section in order to reveal the effect of brands as well. The perceived quality variable has taken its final form after having utilized the scales used in the studies of You and Donthu (2012) and Baalbaki and Guzman (2016).

The study consists of 5 scales in total. The variables and owners of the original scale given within the scope of the research are below.

Table 1 The Variables Used in the Study

Variables	Scale
Perceived Quality	Yoo & Donthu (2012) Baalbaki & Guzman (2016)
Perceived Usefulness	Davis (1989)
Perceived Ease of Use	Davis (1989)
Intention to Use	Davis (1989)
Usage Behavior	Davis (1989)

Perceived benefit and perceived ease of use, which are two essential variables of the Technology Acceptance Model, were noticed to have been affected by many different variables. In recent studies using the Technology Acceptance Model, a need for an affectional connection catch emerges in terms of products and services that rationally benefit in order to affect consumers. Therefore, the perceived quality variable was added in addition to the perceived benefit and perceived ease of use variables, which are two main important components in the Technology Acceptance Model. It is sought to reveal the effect of affective processes in addition to the perceived quality variable within the scope of the draft model of this research. Discussing elaborately the research question about what individual differences and brands mean for the consumer has great importance to light way for further studies.

Having established the draft model, hypotheses of research were put forth. Hypotheses that are dwelled on are below:

H_{0a}: There is no difference between the perceived quality of users based on their preference for smartphones.

H_{1a}: There is a significant difference between the perceived quality of users based on their preference for smartphones.

H_{0b}: There is no significant difference between the perceived usefulness of users based on their preference for smartphones.

H_{1b}: There is a significant difference between the perceived usefulness of users based on their preference for smartphones.

H_{0c}: There is no significant difference between the dimension of perceived ease of use of the users based on their preference for smartphones.

H_{1c}: There is a significant difference between the dimension of perceived ease of use of the users based on their preference for smartphones.

H_{0d}: There is no significant difference between the dimension of intention to use of the users based on their preference for smartphones.

H_{1d}: There is a significant difference between the dimension of intention to use of the users based on their preference for smartphones.

H_{0e}: There is no significant difference between the dimension of usage behavior of the users based on their preference for smartphones.

H_{1e}: There is a significant difference between the dimension of usage behavior of the users based on their preference for smartphones.

Findings of the Research

The test is made made respectively regarding whether there are any differences exist among all the groups in the study scales based on the smartphone brands. The first tested hypothesis is:

H_{0a}: There is no difference between the perceived quality of users based on their preference for smartphones.

H_{1a}: There is a significant difference between the perceived quality of users based on the variable of preference for smartphones.

In the study, the Kruskal-Wallis test is used in comparisons with more than 2 groups to determine whether the answers given to each scale according to the brands are statistically different. Because Welch's t-test is a non-

parametric reliable test, it only detects differences on the basis of two categories. The phone brand group that we will look at in our study is 3.

Table 2 Independent Samples Kruskal Walls Test Faktor PQ

Observations	499
Test Statistics	142,145a
Degrees of Freedom	2
Sig.	,000

Table 3 Brand Comparisons For Factor PQ

Sample 1 Sample 2	Test Statistics	Std. Error	Std. Test St.	Sig.
(3-2)	87,350	15,242	5,731	,000
(3-1)	181,330	15,221	11,913	,000
(2-1)	93,979	15,010	6,261	,000

The test regarding whether any differences exist between the 3 brands in terms of the Perceived Quality factor was made with a non-parametric Kruskal Wallis test. Having detected the existence of difference statistically, binary comparisons were made with the Mann-Whitney U test in order to comprehend among what brands this difference exists. As a result of these comparisons, a statistical difference exists in all binary combinations between 1 (Apple), 2 (Huawei), and 3 (Samsung) as seen in the table. So, having rejected hypothesis Ho, hypothesis H1 is accepted. Because there are significant differences statistically between all phone groups.

Secondly, the test regarding whether any differences exist between phones will be made in terms of the perceived benefit scale.

H0b: There is no significant difference between the perceived benefit of users based on their preference for smartphones.

H1b: There is a significant difference between the perceived benefit of users based on their preference for smartphones.

Table 4 Independent Samples Kruskal Walls Test Faktor PU

Observations	499
Test Statistics	145,726a
Degrees of Freedom	2
Sig.	,000

Table 5 Brand Comparisons For Factor PU

Sample1 Sample 2	Test Statistics	Std. Error	Std. Test St.	Sig.
(3-2)	100,126	15,178	6,597	,000
(3-1)	182,829	15,156	12,063	,000
(2-1)	82,703	14,947	5,533	,000

The test regarding whether any differences exist between the 3 brands in terms of the Perceived Factor was made with a non-parametric Kruskal Wallis test. Having detected the existence of difference statistically, binary comparisons were made with the Mann-Whitney U test in order to comprehend among what brands this difference exists. As a result of these comparisons, a statistical difference exists in all binary combinations between 1 (Apple), 2 (Huawei), and 3 (Samsung) as seen in the (Table 3, Table 4). Under this circumstance, it brings us to the rejection of hypothesis Ho and the acceptance of hypothesis H1 based on the perceived benefit scale.

When the test regarding whether any difference exists between phone brands is made in terms of perceived ease of use, the factor that will be used is:

H0c: There is no significant difference between the dimension of perceived ease of use of the users based on their preference for smartphones.

H1c: There is a significant difference between the dimension of perceived ease of use of the users based on their preference for smartphones.

Table 6 Independent Samples Kruskal Walls Test Faktor PEU

Observations	499
Test Statistics	151,853a
Degrees of Freedom	2
Sig.	,000

Table 7 Brand Comparisons For Factor PEU

Sample 1 Sample 2	Statistics	Std. Error	Std. Test St.	Sig.
(3-2)	100,126	15,178	6,597	,000
(3-1)	182,829	15,156	12,063	,000
(2-1)	82,703	14,947	5,533	,000

The test regarding whether any differences exist between the 3 brands in terms of the Perceived Ease of Use Factor was made with a non-parametric Kruskal Wallis test. Having detected the existence of difference statistically, binary comparisons were made with the Mann-Whitney U test in order to comprehend among what brands this difference exists. As a result of these comparisons, a statistical difference exists in all combinations between 1 (Apple), 2 (Huawei), and 3 (Samsung) as seen in the table (Table 5, Table 6). This brings us to the rejection of constructed hypothesis H_0 , and the acceptance of hypothesis H_1 .

Lastly, the hypotheses below are tested regarding whether the dimensions of factors belonging to the intention to use and usage behavior causes any differences based on phone brands. These hypotheses are respectively as such:

H_{0d} : There is no significant difference between the dimension of intention to use by the users based on their preference for smartphones.

H_{1d} : There is a significant difference between the dimension of intention to use by the users based on their preference for smartphones.

H_{0e} : There is no difference between the dimension of usage behavior of the users based on their preference for smartphones.

H_{1e} : There is a significant difference between the dimension of usage behavior of the users based on their preference for smartphones.

Table 8 Independent Samples Kruskal Walls Test Faktor IU

Observations	499
Test Statistics	162,842a
Degrees of Freedom	2
Sig.	,000

Table 9 Brand Comparisons For Faktor IU

Sample 1 Sample 2	Test Statistics	Std. Error	Std. Test St.	Sig.
(3-2)	102,700	15,531	6,612	,000
(3-1)	197,909	15,509	12,761	,000
(2-1)	95,209	15,295	6,225	,000

Table 10 Independent Samples Kruskal Walls Test Faktor UB

Observations	499
Test Statistics	130,758a
Degrees of Freedom	2
Sig.	,000

Table 11 Brand Comparisons For Faktor UB

Sample 1 Sample 2	Test Statistics	Std. Error	Std. Test St.	Sig.
(3-2)	67,137	14,159	4,742	,000
(3-1)	160,651	14,139	11,362	,000
(2-1)	93,514	13,944	6,707	,000

Similarly, the test regarding whether any differences exist between the 3 brands in terms of the Perceived Ease of Use and Usage Behavior Factors was made with a non-parametric Kruskal Wallis test. Having detected the existence of difference statistically, binary comparisons were made with the Mann-Whitney U test in order to comprehend among what brands this difference exists. As a result of these comparisons, a statistical difference exists in all binary combinations between 1 (Apple), 2 (Huawei), and 3 (Samsung) as was seen in the tables (Table 7; Table 8; Table 9; Table 10;). It proves to us that mobile phone brands are perceived differently in the dimensions of both intention to use and usage behavior.

Table 12 Ratios by Brand

	Faktor PQ	Faktor PU	Faktor PEU	Faktor IU	Faktor UB
Apple	4.45	4.51	4.53	4.55	4.48
Huawei	3.58	3.65	3.67	3.69	3.66
Samsung	4.06	4.13	4.10	4.15	4.00

After the average values of phone brands were determined to be different statistically based on each factor in the different tests and when how this difference occurs is examined with the numerical values: The satisfaction for Apple is far higher than the other two brands by far with an approximately average value of 4.5 based on each scale. Another surprising conclusion is the existence of Huawei based on all factors in terms of average value.

Conclusion

Due to the increasing number of technology applications targeting consumers today, this brings up the case of examining the variables which motivate consumers to adopt and use new technologies. This study aims to reveal the factors that affect the consumers' adaptation of artificial intelligence applications and augmented reality – one of the components of Industry 4.0- applications of brands taking place in technology sectors examining external factors which might affect the acceptance of artificial intelligence and augmented reality technologies, understanding the behaviours of consumers and contributing to further studies.

Kruskal Wallis test was used in the comparisons of more than two groups to determine whether any differences exist statistically about the answers given for each scale according to the brands in this study. The phone brands which we will observe are three brands. The test was made respectively regarding whether there are any differences exist among all the groups in the study scales based on the phone brands.

After the average values of phone brands were determined to be different statistically based on each factor in the different tests and when how this difference occurs is examined with the numerical values: Apple has provided high satisfaction with an approximately average value of 4,5 based on each scale and was observed to be ahead of two other brands. According to another finding obtained in this research, the technology brand Huawei was observed to exist in terms of average value based on all factors. Therefore, a significant difference is observed to exist in the dimensions of the perceived quality, perceived benefit, perceived ease of use, intention to use, and usage behavior based on the preference variable of smartphones by the users.

The research, which was conducted as a thesis study, was carried out by creating a research model including the variable of perceived quality to the original TAM model by Davis in order to explain the consumer behaviours towards technological

products and services. The research conducted in this sense contributes to the literature by providing an opportunity to make a comparison with further studies which will be carried out by referring to different variables affecting the behaviours of the consumers (image, confidence, perceived risk, subjective norms, external variables, etc.)

Within the scope of the research, brands that are leaders in the technology sector were selected for the preference of brand as it is focused on consumer behaviours towards technological products and services. It is important to note that it can be focused on differences between sectors with the studies conducted in different sectors for the next years.

In today's world, a conscious consumer profile has emerged. A conscious customer is the one who carries out the purchase action by looking at the needs and choosing the most proper one among the options. Based on the data obtained from the result of the research, it can be argued that consumers highly prefer products and services which require their needs in terms of acceptance of augmented reality and artificial intelligence applications – components of Industry 4.0. Therefore, it empowers the idea that today's consumers profile focuses rather on the features which provide rational benefit.

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Yazar Bilgileri

Author details

** (Sorumlu Yazar **Corresponding Author**) Dr. Öğr. Üyesi, İstanbul Aydın Üniversitesi Anadolu Bil Meslek Yüksekokulu, deryasahin2@aydin.edu.tr, Orcid: 0000-0002-5894-1554

*** Prof. Dr., İstanbul Üniversitesi İletişim Fakültesi, ecek@istanbul.edu.tr, Orcid: 0000-0002-8911-6207

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