AÜİİBFD
Anadolu Üniversitesi İktisadi ve İdari Bilimler Fakültesi
Anadolu University Journal of Economics and Administrative Sciences

Cilt: 24, Sayı: 1, Yıl: 2023
e-ISSN: 2687-184X
https://dergipark.org.tr/en/pub/anadoluibfd

Makale Türü / Submission Type: Araştırma Makalesi / Research Article
Başvuru Tarihi / Date Submitted: 03/10/2022
Kabul Tarihi / Date Accepted: 21/12/2022

DOI: 10.53443/anadoluibfd.1183785
2023, 24(1), 20-49

ATTITUDES OF Y AND Z GENERATIONS TOWARDS ONLINE SHOPPING*

Kenan ATEŞGÖZ[2], Cemil ULUKAN[3]

Abstract

Marketing environments have been transforming because of the revolutionary changes witnessed chiefly in technology. Specifically, Internet-driven technologies affect marketing conditions as well as consumer profiles. Hence, a good understanding of Internet-based shopping patterns and differentiated, tech-savvy consumer generations is a necessity for business organizations for sustainable success, especially in marketing. This study aims to explore whether the attitudes of generations Y and Z towards online shopping differ according to the sub-dimensions of e-TAM. Participants of the current study include 1031 undergraduate students. Of the total sample, 531 students are titled Gen Z and other 500 students are Gen Y, according to their date of birth. Independent sample t-test and regression analysis are performed to compare the attitudes of generations. The findings indicate that generations Y and Z have similar attitudes towards online shopping but their reasons for using online shopping differ. In addition, we found that the mean score of men in terms of safety was statistically significantly higher than the mean score of women (t(993)=2.631; p=.009; Ƞ2= .16).

Keywords: Generation Y, Generation Z, Online Shopping, Electronic Shopping, Extended-Technology Acceptance Model

JEL Codes: M31, M39

Y VE Z KUŞAKLARININ ONLINE ALIŞVERİŞ TUTUMLARI

Öz

Piyasa çevreleri, esas olarak teknolojide tanık olunan devrim niteliğindeki değişiklikler nedeniyle dönüşmektedir. Spesifik olarak, internet temelli teknolojiler, tüketici profillerinin yanı sıra piyasa koşullarını da etkilemektedir. Bu nedenle, internet tabanlı alışveriş biçimlerinin ve farklılaşan, teknoloji konusunda bilgili tüketici nesillerinin iyi anlaşılması, özellikle piyasada sürdürülebilir başarı yolunda ticari kuruluşlar için bir zorunluluktur. Bu çalışma, Y ve Z kuşaklarının online alışverişe yönelik tutumlarının e-TAM'ın alt boyutlarına göre farklılaşıp farklılaşmadığını araştırmayı amaçlamaktadır. Eldeki çalışmanın katılımcıları 1031 lisans öğrencisidir. 531 öğrenci doğum tarihlerine göre Z Kuşağı, diğer 500 kişi ise Y Kuşağı olarak adlandırılmaktadır. Kuşakların tutumlarını karşılaştırmak için bağımsız örneklem t testi ve regresyon analizi yapılmıştır. Bulgular, Y ve Z kuşaklarının çevrimiçi alışverişe yönelik tutumlarının benzer olduğunu ancak çevrimiçi alışverişi kullanma nedenlerinin farklı olduğunu göstermektedir. Ayrıca güvenlik açısından erkeklerin puan ortalamalarının, kadınların puan ortalamalarından istatiksel olarak anlamlı bir şekilde yüksek olduğu bulunmuştur (t(993)=2.631; p=.009; Ƞ2= .16).

Anahtar Kelimeler: Y Kuşağı, Z Kuşağı, Online Alışveriş, Elektronik Alışveriş, Genişletilmiş-Teknoloji Kabul Modeli

Jel Kodları: M31, M39

* Bu çalışma Anadolu Üniversitesi Sosyal Bilimler Enstitüsü İşletme (İngilizce) Anabilim Dalı'nda Prof. Dr. Cemil ULUKAN danışmanlığında Kenan ATEŞGÖZ tarafından "Genişletilmiş-Teknoloji Kabul Modeli Kapsamında Y ve Z Kuşaklarının Çevrimiçi Alışverişe Yönelik Tutumlarının Karşılaştırılması" başlığı ile tamamlanarak 23/08/2019 tarihinde savunulan Yüksek Lisans tezinden türetilmiştir.
Bu çalışma için Anadolu Üniversitesi Etik Kurulunun 26/12/2018 tarihli ve 114410 nolu kararı ile etik kurul onayı alınmıştır.

[2] Arş. Gör. Dr., Çukurova Üniversitesi, İletişim Fakültesi, katesgoz@cu.edu.tr, https://orcid.org/0000-0002-2771-4965
[3] Prof. Dr., Anadolu Üniversitesi, Açıköğretim Fakültesi, culukan@anadolu.edu.tr, https://orcid.org/0000-0003-0963-2883

INTRODUCTION

Information-oriented sectors came into prominence together with the advancements that emerged in Internet-driven technologies, as a field where production and accumulation of information, sustainability of education, and well-qualified people became leading factors as well as communication technologies and e-business. All those developments created the infrastructure of today's information society, which caused new behavioral manners against centralized and standardized structures (Aktan and Vural, 2016). As a result, the growing power of the Internet and developments in information and communication technologies (namely ICTs) have affected the role of people in social networks as well. Thus, as people come together in virtual environments, social life practices have been deeply affected leading people to develop more intense relations with their social environments (Tuomi and Geser, 2005).

Meanwhile, rapid changes in the Internet technologies changed the business world as well in a manner that can be named as "digital" or "information economy". In this new era, consumers became wiser, more demanding, and selective (Svatosova, 2012). More specifically, along with the appearance of digital technologies including networks, social media, and similar online platforms, activities that people perform for socialization, entertainment, information obtainment have differentiated as well as the works executed in the public area. Also, business methods and activities have transformed to a great extent which led to a new decentralized, niche-based, and flexibly structured economy named as "media economy".

Differing from classical manners of economy, media economy enabled customization, abundance, diversity terminating concentration and dominance of the monopolies so that new entrepreneurs easily get involved in the business world (Freedman, 2012). In this sense, advancements on the Internet and network technologies provided dynamism and momentum for e-commerce activities, which led companies to change the route towards business-to-customer (B2C) e-commerce practices (Chiu, Lin, Sun and Hsu, 2009). This model changed the traditional shopping patterns as it has never seen before (Chen and Tan, 2004). Not only business organizations but also consumers became one of the representatives benefiting from Internet technologies as a part of their e-commerce activities (Park, Lee and Ahn, 2004, p. 6). In this sense, the Internet came out as an alternative shopping tool that enabled more flexible forms of shopping activities on a global scale, especially after people embraced it as a new medium of interactive communication processes (Cengiz and Şekerkaya, 2010).

Constant changes in societies lead people to change their values because of the factors such as age, education, income, religion, etc. (Morsümbül, 2014). Extensive technological gaps and differences may become more visible among people even in daily life practices, especially among people representing

different generations, in terms of proficiency and familiarity towards technology (Bilgiç, Duman and Seferoğlu, 2011). People, representing different generations, tend to use technologies according to differing personal purposes, abilities, and prior experiences (Kuyucu, 2017). For example, younger generations are already engaged in new technologies for messaging, sharing, buying, selling, searching, programming, chatting, surfing, reporting, analyzing, downloading, creating new content, and so on (Prensky, 2005).

Since different epochs are tended to have distinctively dominant values which form the way people think or behave, generations may have been pointed out among the most important representatives that reflect such era-oriented values (Altuntuğ, 2012). Increasing number of scholars have become more concerned with generational distinctions supposing that generations display varieties in terms of their values, purposes, and expectations (Cennamo and Gardner, 2008).

Considering that some classifications also have been made regarding consumers (Nazari and Hafezi, 2013), forthcoming tendencies towards marketing and online shopping practices may be revealed through studying and understanding generational characteristics. Within this regard, the goal of the study is to compare the common characteristics of Gen Y and Gen Z and to reveal their attitudes towards online shopping. More specifically, "Do attitudes of Gen Y and Z towards online shopping differ within the scope of e-TAM?"

Gen Y and Gen Z, as the youngest and potential economic forces, have been quite significant target groups for advertisers and marketers. Researchers believe that these two generations are comparable in terms of their experiences towards various technologies involving online shopping. Gen Y, born between 1981 and 1998, experienced traditional telecommunication technologies along with the newest technologies while Gen Z, born between 1999 and 2009, are not familiar with pre-digitalized world and are more experienced with digital technologies. In this study, university students in the Prep School represent Gen Z while fourth year students represent Gen Y.

Along with the main goal of this study, researchers also wish to discuss the critical implications for future-based strategies of businesses regarding technology acceptance and online shopping attitudes of most dynamic, potential, and youngest customer profiles. Among the rising tendencies towards online consumption, detection of the factors that affect the attitudes of consumers regarding online shopping is getting harder. Therefore, it is believed that technology acceptance of the consumers may have some implications concerning the acceptance of online shopping for the reason that online shopping is an innovative method of retailing based on the internet and Web technologies. Hereunder, e-TAM may be regarded as a basis for the inspection of acceptance patterns of online shopping it is because the model has

already been used by many scholars in online shopping-related studies (Ashraf, Thongpapanl and Auh, 2014; Ha and Stoel, 2009; Ofori and Appiah-Nimo, 2019; Tong, 2010; Yadav and Mahara, 2019).

LITERATURE REVIEW

According to the literature, people may have been categorized into various generations as silent, traditional, baby boomers, X, Y, M, or Z (Ayhün, 2013). However, labels used or periods accepted for those generations may vary as well. Simply put, even for the same generation there are different periods and labels defined in the literature. In this sense, Table 1 displays the diversity and differences of labels and periods appointed for both the same and different categories of generations.

Table 1: Labels and time periods of generations in different sources

Source	**Labels**				
Howe and Strauss (2000)	Silent Generation (1925–1943)	Boom Generation (1943–1960)	Generation 13 (1961–1981)	Millennial Generation (1982–2000)	-
Lancaster and Stillman (2002)	Traditionalists (1900–1945)	Baby Boomers (1946–1964)	Generation Xers (1965–1980)	Millennial Generation; Echo Boomers; Generation Y; Baby Busters; Generation Next (1981–1999)	-
Martin and Tulgan (2002)	Silent Generation (1925–1942)	Baby Boomers (1946–1960)	Generation X (1965–1977)	Millennials (1978–2000)	-
Oblinger and Oblinger (2005)	The Mature (<1946)	Baby Boomers (1947–1964)	Gen-Xers (1965–1980)	Gen-Y; NetGen; Millennials (1981–1995)	Post-Millennials (1995–present)
Tapscott (1998)	-	Baby Boom Generation (1946–1964)	Generation X (1965–1975)	Digital Generation (1976–2000)	
Zemke et al. (2000)	Veterans (1922–1943)	Baby Boomers (1943–1960)	Gen-Xers (1960–1980)	Nexters (1980–1999)	
Reeves and Oh (2008)	Mature Generation (1924–1945)	Boom Generation (1946–1964)	Generation X (1965–1980)	Millennial Generation (1981–2000)	Generation Z (2001–present)

Source: Reeves and Oh, 2008, p. 296-297, as cited in Törőcsik, Szűcs and Kehl, 2014, p. 27

Nevertheless, this study focuses on the two prominent generations of the recent decades: Gen Y and Gen Z. Gen Y, born into technology, have proficiency in Internet applications, computers, and cellphones (Kalaycı and Kökçel, 2017). Especially Web 2.0 technologies broke new ground in the lifestyle of Gen Y and Internet technologies became indispensable for them in the daily life practices. More than 90% of this Gen Y benefit from cellphones and computers. Likewise, most of them have at least three technological devices or even more (Kuyucu, 2017). As for the members of Gen Z, GSM is one of the prominent symbols. Spending time with portable and mobile technological devices is a predominantly known fact about this Gen (Ayhün, 2013). Smartphones, tablet computers, iPods, or similar devices are regarded as one part of the body of these youngsters (Yalçın, Sökmen and Kulak, 2013). Gen Z mostly prefers media tools for contacting people rather than face-to-face communication. They almost do not have any idea of the world without the Internet, computer, or mobile technologies (Rothman, 2016).

Considering generations Y and Z, the number of studies has been raising considerably in recent times as well as the wider range of scope of research. Thus, in the literature, it can be seen that generations Y and Z have been researched within the scopes of *workplace attitude* (Bencsik, Horváth-Csikós and Juhász, 2016); human capital management (Bejtkovský, 2016); *attraction and retention in the workplace* (Goessling, 2017); *perception of teamwork in the workplace* (Kutlák, 2019); *differences in work values* (Dick, 2019); *perception of E-government services* (Ersöz and Demir-Askeroğlu, 2020); *uses of social media* (Nuzulita and Subriadi, 2020; Omeragić, 2021); *exploration of banking experiences and expectations* (Shams, Rehman, Samad and Oikarinen, 2020); *mentality features* (Pishchik, 2020); *management of stress in the workplace* (Stobiecka and Pangsy-Kania, 2021); *impact of individualism and self-reliance on the working environment* (Kutlák, 2021); *media consumption patterns* (Laor and Galily, 2022); *perceptions regarding media disinformation* (Todorova, 2022). Also, it has been noticed that generations are taken into consideration by business and marketing environments too such that plenty of studies have been carried out in recent times. Accordingly, studies as *retro marketing on brand loyalty* (Oğuz, 2017); *social media usage for sustainable tourism marketing* (Hysa, Karasek and Zdonek, 2021) *consumer purchasing behavior* (Baydaş, Sezer and Kanoğlu, 2021); *brand usefulness* (Adriana-Camelia, 2015); *marketing and consumption practices* (Canavan, 2020); *purchase intentions* (Paulienė and Sedneva, 2019); *post-COVID-19 pandemic e-commerce continuance intention* (Thoumrungroje, 2021); or *online shopping habits* (Chang and Chen, 2021) over generations Y and Z have been continually implemented.

As it can be seen, studies implemented over generations' purchasing and shopping activities somehow have been affiliated with technology use which may be originated from the fact that generations Y and especially Z do their daily practices with new technologies at a great rate. Herein, among different theories

focusing on the explanation of user adoption and acceptance of new technologies, the Technology Acceptance Model (TAM), developed by Davis (Davis, Bagozzi and Warshaw, 1989, p. 1985, 1989; Agarwal and Prasad, 1999) stands out. In this sense, among many previous kinds of research conducted in the literature, TAM has been utilized and validated in the inspection of technology admission of users (Ha and Stoel, 2009) so that studies focusing on the various patterns of technology acceptance including *telemedicine technology* (Chau and Hu, 2001); *desktop video conferencing* (Townsend, Demarie and Hendrickson, 2001); *online games* (Hsu and Lu, 2007; Huang, Lu and Wong, 2003); *banking technologies* (Dalcher and Shine, 2003) and *m-commerce technology* (Bruner and Kumar, 2005) have been carried out. Likewise, it can be observed that the technology acceptance model has been utilized in recent generations' online shopping practices in which information technology use quite dominating. Especially studies, leaning on online shopping practices of generations Y and Z, have been benefiting from the technology acceptance model. In this regard, prominent studies comprising *online food order behavior* (Arı and Yılmaz, 2015); *online shopping adoption* (Ashraf et al., 2014); *online shopping behaviors* (Gültaş, 2020); *online purchase decision* (Hassan, Kazmi and Padlee, 2019); *repurchase intention in online shopping* (Miandari, Yasa, Wardana, Giantari and Setini, 2021); *determinants of online shopping* (Ofori and Appiah-Nimo, 2019); *acceptance of mobile shopping applications* (Seyhun and Kurtuldu, 2020); *e-commerce/online shopping acceptance* (Valencia, Alejandro, Bran, Benjumea and Valencia, 2019).

To address the leading studies conducted in this direction in more detail, the research, conducted by Arı and Yılmaz (2015), can be examined as one of the important examples. Accordingly, this study aims to reveal the factors affecting the attitudes and behaviors of university students towards online food orders using TAM. Within the scope of that purpose, 300 hundred students, studying at Eskişehir Osmangazi and Anadolu universities, were surveyed. Utilizing the structural equation model and CHAID analyses, the study found out that perceived usefulness and perceived ease of use positively affect attitude towards behavior. Besides, results show that attitude toward behavior and personal norms have an adjuvant effect on the number of students' online food ordering. Also, CHAID analysis revealed that factors such as the average number of food orders per month, the time started to use the internet, the state of awareness of the online food websites, registered universities, and fathers' education level affect online food ordering.

Another example of study, implemented by Ashraf et al. (2014), examines the adoption of e-commerce throughout Pakistan and Canadian cultures aiming to validate the classical TAM, develop an extended TAM, and test the extended TAM's convenience for the context of emerging Asian markets. Accordingly, 480 university students were surveyed by which factor analysis was conducted. The study

results that perceived usefulness and perceived ease of use influence the intentions of consumers regarding shopping online in both cultures.

Gültaş (2020), as another example, conducted research inspecting the online shopping behavior of consumers. In this regard, the factors that affect purchasing behaviors of the consumers are aimed to be determined within the scope of TAM. Accordingly, 700 people, consisting of both employees and students of İnönü University, were surveyed. The study outcomes show that the attitudes of the participants to accept technology differ according to their age and income. However, the characteristics of the participants such as gender, and professional status do not affect their attitudes towards technology acceptance. Also, it has been found that the trust of the participants in online shopping, the pleasure they feel from shopping online, the facilitating conditions of online shopping, the perceived benefit, and ease of use affect their online purchasing behavior. The social and functional innovativeness of the participants affects the perceived usefulness and ease of use of technology acceptance. It has been designated that the perceived usefulness of online shopping affects purchase intention.

Another one, done by Hassan et al. (2019), inspects online purchase decisions of university students based on TAM. In this respect, it has been aimed to determine the reasons for online purchase trend adoption among young and educated people. Accordingly, qualitative research has been conducted among a hundred university students, aged between 18 and 25, in total. The study benefited from semi-structured interviews to find out the online shopping trends of students on two famous websites, AliExpress and Daraz. The result of the study displays that a considerable amount of students use online stores of AliExpress and Daraz via their websites. However, the number of students buying items online is not much since they do not have any free budget or their salaries. In short, online purchase perception and intention have not been affected positively by convenience, pleasure, handiness, item qualities, shopper attributes, situational factors, previous coincidences regarding online purchases, and trust in online purchases.

Miandari et al. (2021), on the other hand, conducted a research aiming to relieve factors that affect online shopping repurchase intention within the scope of TAM. The study utilized a quantitative method benefiting from the Non-Probability Sampling technique with a purposive sampling method by which 182 people, aged between 18 and 36, have been surveyed. The structural Equation Model has been chosen as the analysis technique as well as using the SmartPLS 3.0 analysis tool. The result of the study shows that perceived privacy, perceptions of web design, and perceptions of reliability variables positively and significantly affect repurchase intention.

Besides, the study, executed by Ofori and Appiah-Nimo (2019), inspects determinants of online shopping behaviors of tertiary students through TAM. In this regard, a survey was conducted on 580 undergraduate students as sampling. Structural Equation Modelling-Partial Least Squares has been utilized as a statistical analysis technique. The outcome of the study shows that ease of use has a significant influence on usefulness. Also, perceived cost displays no significant effect on purchase intention while it has been pointed out most significant factor affecting actual use of online shopping for students. Furthermore, perceived risk has a significant influence on purchase intention on the contrary that it does not affect actual use significantly.

Additionally, the study, conducted by Seyhun and Kurtuldu (2020), examines factors that have an impact on the adoption of mobile shopping applications using the extended technology acceptance model (e-TAM) which includes variable as perceived enjoyment, innovativeness, satisfaction, and trust. Implementing a one-to-one survey and using convenience sampling method data has been collected. Afterward, exploratory factor analysis, confirmatory factor analysis, and reliability analysis have been utilized as well as the structural equation model. The result of the research displays that perceived usefulness, trust and innovativeness have a positive impact on satisfaction. Besides, behavioral intention has been positively affected by innovativeness, satisfaction, and perceived usefulness.

And finally, the study, implemented by Valencia et al. (2019), aims to inspect factors for e-commerce adoption among university students within the scope of TAM. Accordingly, variables such as perceived security and trust have been added to the model. In this respect, the study, designed with a quantitative methodology, utilized a cross-sectional exploratory research technique to validate the model. The data was collected through a survey conducted on 369 university students and tested with confirmatory factor analysis. The outcome of the study shows that there is a correlation between attitude and intention. Also, perceived usefulness, trust, and ease of use have been determined as the premise of the online shopping intention of the consumers.

Technology Acceptance Model (TAM) and Extended-Technology Acceptance Model (E-TAM)

Various models are focusing on the explanation of user adoption and acceptance of new technologies. Among the well-known models are *Diffusion of Innovations*; *Perceived Characteristics of Innovations* (Moore and Benbasat, 1991); *Social Cognitive Theory*, *Theory of Reasoned Action*, *Theory of Planned Behavior, Technology Acceptance Model* (Davis, 1989; Davis et al., 1989); *Unified Theory of Acceptance and Use of Technology*, *Expectation Confirmation Theory*. Among others, Technology Acceptance Model (TAM) seems like the most well-accepted theory (Agarwal and Prasad, 1999). The advent of the TAM has

been based on the Theory of Reasoned Action (TRA), which has been put forward, by Fishbein and Ajzen in 1975. Being accepted as an intention-based model, TRA has been regarded as very effective to explain human behaviors. For this reason, TRA has been considered suitable for the research of factors regarding computer use behavior. Concerning user acceptance of information systems and computer use behavior, Davis (1986) made a great contribution to the field with the introduction of the TAM. Davis's model aimed to explain the acceptance of information systems and computer use behavior as an adaptation of TRA. However, compared to TRA, which is the theoretical foundation of TAM, TAM has been a relatively more specific theory focusing just on the behaviors regarding the acceptance of information systems and usage of computer technologies. The original TAM claims that perceived usefulness and perceived ease of use are two main factors, which determine computer acceptance behaviors (Davis et al., 1989, p. 1988, 1989).

Perceived usefulness refers to the extent to which users consider that utilizing the technology in question may contribute to their performances positively (Ha and Stoel, 2009; Venkatesh, 2000).

Perceived ease of use represents the extent to which consumers expect that using a certain technology would be effortless (Ha and Stoel, 2009; Venkatesh, 2000).

What TAM suggests is that perceived usefulness and perceived ease of use may designate the behavioral intention of the users towards specific technologies so that final behavior would be formed accordingly. To put this in order, perceived ease of use would affect perceived usefulness within the scope of usage of a certain technology (Venkatesh, 2000).

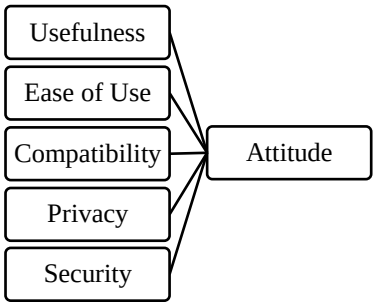
TAM has been used commonly in studies regarding the acceptance and usage of information technologies (Bhattacherjee and Sanford, 2009). In this sense, Web sites, as a prominent representative of those technologies and obligatory interface for online shopping activities are considered as in the research area of TAM. Simply put, TAM has been admitted as one of the possible models in the analysis of online shopping activities as it embraces websites representing information technologies (Gefen, Karahanna and Straub, 2003, p. 53-54). However, some researchers working on e-commerce practices proposed that TAM would not be sufficient in the explanation of online shopping studies if any extension is not integrated into the core components (perceived ease of use and perceived usefulness) of the model (Yılmaz and Tümtürk, 2015, p. 360). Hence, the extended Technology Acceptance Model (e-TAM) emerged as a commonly used model in analyzing online shopping behaviors of people. In this sense, e-TAM had been formed along with the new beliefs added by different studies based on e-commerce (Hernandez, Jimenez and Martin, 2009, p. 1233-1234). Accordingly, beliefs added include Trust and Satisfaction (Kim, Ferrin and Rao, 2003); Perceived Benefits (Davis, 1989; Moore and Benbasat, 1991); Perceived Performance (Davis et al.,1989;

Davis 1989); Confirmation (Bhattacherjee, 2001); Familiarity and Trust (Gefen, 2000); Satisfaction (Fornell, 1992); Perceived Risk (Kohli, 1989); Willingness to Purchase (Mathieson, 1991); Trust (Portz, 2000) and Compatibility, Security, Privacy, Self-efficacy, Normative Beliefs by Vijayasarathy (2004) who named this new model as "augmented or enhanced TAM".

RESEARCH MODEL

In our research, we focus on the consumers' attitudes regarding the sub-dimension of e-TAM. Therefore, we especially pay attention to Vijayasarathy's model within the scope of attitude. According to this model, usefulness, ease of use, compatibility, privacy, and security are the subdimensions of "attitude" while usefulness, normative beliefs, and self-efficacy are subdimensions of "intentions" (Vijayasarathy, 2004). In this regard, Figure 1 displays our research model.

Figure 1. The research model



Hypotheses of the Study by the Main Components of E-TAM

Perceived usefulness

Perceived usefulness can be defined as the degree to which consumers believe online shopping would contribute to their productivity regarding shopping activities (Shih, 2004) enabling them to reach helpful information, compare and buy goods and services in a faster manner (Vijayasarathy, 2004). There is a positive relationship between information systems and the attitudes of users towards adoption of them (Park et al., 2004). Considering websites, which is the main tool of online shopping, as an information system, it can be concluded that consumers may increasingly use online shopping environments if they are served well by websites of business organizations. Ha and Stoel (2009) found that perceived usefulness is a significant predictor of attitudes regarding online shopping. In addition to this, Barkhi, Belanger, and Hicks (2008) suggest that perceived usefulness is influential in the utilization of online shopping. Moreover, Vijayasarathy (2004) elicited that perceived usefulness may be regarded as a strong predictor of the online

shopping attitudes of consumers. Therefore, we assume that perceived usefulness is influential on the attitudes of consumers.

H1. Attitudes of Gen Z towards online shopping are statistically different than Gen Y in terms of perceived usefulness.

Perceived ease of use

As consumers think that information systems are easy to use, they increasingly adapt to utilize them (Park et al., 2004). Considering that online shopping environments are based on information systems, (i.e., web technologies) the consumer will utilize online shopping if they think that it is effortless. Çelik (2009) found that perceived ease of use could predict the attitudes of consumers towards online shopping. In addition, Vijayasarathy (2004) disclosed that perceived ease of use affects online shopping attitudes of consumers strongly. Accordingly, we assume that perceived ease of use has an impact on the attitudes of consumers based on the findings of the above-given research.

H2. Attitudes of Gen Z towards online shopping are statistically different than Gen Y in terms of perceived ease of use.

Compatibility

Compatibility has been associated with the degree to which consumers believe that new technology would correspond to their necessities and norms. In this case, if consumers believe that online shopping is in harmony with their requirements and preferences, then they would benefit from it (Vijayasarathy, 2004). O'Cass and Fenech (2003) come up with the finding that compatibility affects attitudes towards online shopping. Moreover, Vijayasarathy (2004) elicited that compatibility may be considered a powerful predictor with respect to online shopping attitudes. Thus, we assume that compatibility is a factor affecting the attitudes of consumers.

H3. Attitudes of Gen Z towards online shopping are statistically different than Gen Y in terms of compatibility.

Privacy

Privacy has been referred to as the degree to which consumers doubt that online shopping units would not be sensitive about their privacy. Thus, consumers may be concerned about their personal information

and ill-usage of it by strangers (Vijayasarathy, 2004). Appropriately, we assume that privacy is one of the effective factors on the attitudes of consumers.

H4. Attitudes of Gen Z towards online shopping are statistically different than Gen Y in terms of privacy.

Security

Perceived security, which is quite significant in Internet-based market spaces, has been associated with the extent to which consumers consider that online purchasing activities are secure enough for them. For this reason, business organizations invest in advanced technologies to provide secure business environments to their potential customers (Barkhi et al., 2008). O'Cass and Fenech (2003); Liao and Cheung (2001) come up with the result that security affects attitudes of the Internet users towards online shopping as an important factor. Besides, Keisidou, Sarigiannidis and Maditinos (2011) suggest that perceived security positively affects attitudes towards online shopping. Furthermore, Vijayasarathy (2004) elicited that security is a strong factor in the prediction of online shopping attitudes of consumers. Consequently, we assume that security is influential on the online shopping attitudes of consumers.

H5. Attitudes of Gen Z towards online shopping are statistically different than Gen Y in terms of security.

Best predictor variables for online shopping attitudes

The second research question is related to whether the best predictor (usefulness, ease of use, compatibility, privacy, and security) differs regarding online shopping attitudes of Gen Y and Z or not. Accordingly, we assume that the best predictor variables for online shopping attitudes of Gen Y and Z differs.

H6. The best predictor variables for online shopping attitudes of gen Y and Z differ with respect to:

H6a. *Perceived usefulness.*

H6b. *Perceived ease of use.*

H6c. *Compatibility.*

H6d. *Privacy.*

H6e. *Security*.

Gender

Significance of demographic variables in individual activities such as the adoption of information technologies (Faqih and Jaradat, 2015), internet usage (Zhang, 2005) or online shopping (Hernandez et al., 2009; Park et al., 2004) has been pointed out in the literature. Moreover, Akhlaq and Ahmed (2016) claim that demographic characteristics such as education, income, or gender may be influential with regard to online shopping behaviors. Among those characteristics, gender has been inspected in an important number of studies in accordance with the online shopping activities within the scope of TAM (Akhlaq and Ahmed, 2016; Faqih and Jaradat, 2015; Law and Ng, 2016; Shi, Wu, Zhou and Chen, 2009). For this reason, within the scope of the current study, gender has been considered important to be inspected regarding the online shopping attitudes of Gen Y and Z. The reason for just choosing gender excluding demographic characteristics such as age, income, or education is that the sample of the current study, which consists of university students, is quite similar in terms of excluded characteristics. In this regard, we assume that gender is an effective factor attitude of gen Y and Z differ.

H7. Online shopping attitudes of gen Y and Z differ in terms of gender.

[4]METHODOLOGY

Sample and Data Gathering

The study sample included Foreign Languages Prep School students (i.e., as the representative of Gen Z) and senior (i.e., as the representative of Gen Y), studying in both Anadolu University and Eskisehir Technical University, located in Eskisehir, Turkey. The research data were collected through a survey developed by Vijayasarathy in 2004 to evaluate the individuals' attitudes towards online shopping. A purposive and convenience sampling method was preferred because the sample of our research belongs to the similar sub-group of society regarding income level, education level, and socio-economic conditions. Preparation students are generally at the ages of 18-20 while senior students are mostly at the age of 23 and older. Accordingly, senior students can be regarded as Gen Y who were born between 1981 and 1998 (Alch, 2000; Smola and Sutton, 2002; Sessa, Kabacoff, Deal and Brown, 2007) while preparation school students as Gen Z who were born between 1999 and 2009 (McCrindle and Wolfinger, 2009; Tulgan, 2013). The research data were collected from 652 Prep students and 532 senior students. Yet, a total of 221

[4] Bu çalışma için Anadolu Üniversitesi Etik Kurulunun 26/12/2018 tarihli ve 114410 nolu kararı ile etik kurul onayı alınmıştır.

questionnaires were excluded because of missing or improper values, leaving a total of 1031 valid questionnaires. Table 2 displays the statistics of the sample.

Table 2: Demographics of the research sample

University	Generations	Gender		Total
		Male	Female	
Anadolu University	**Y**	202	187	389
	Z	95	178	273
Eskisehir Technical University	**Y**	56	55	111
	Z	147	111	258

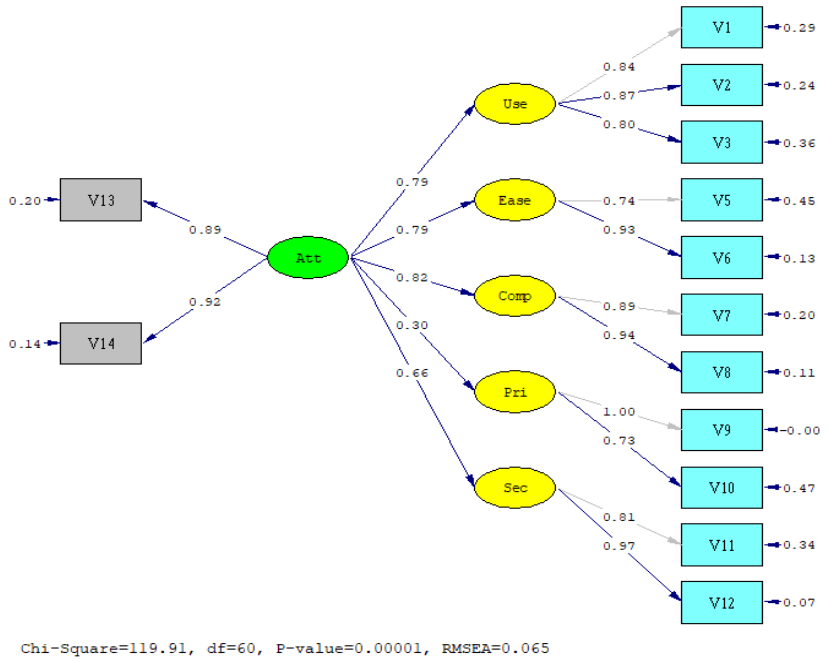
Note: Gen Y is represented by senior students while Gen Z is represented by Prep students at respective schools.

Measurement Items

Validity of the adapted scale

After checking the suitability of the data and ensuring no violation, confirmatory factor analysis was conducted with 14 items. However, the results regarding the six factors with 13 items structured model supported. The path diagrams of the model, including factor loadings, error variance, and factor covariance were displayed in Figure 2.

Figure 2. Path diagram of the final 13-item-six-factor structure model



The usefulness sub-scale was measured by three items whereas the rest (i.e., ease of use, compatibility, privacy and security, and attitude) was measured by two items. All items in the scale have high factor loadings and low error variance, indicating all items contribute to the scale. In other words, the validity of the scale was proven with confirmatory factor analysis. Also, usefulness, ease of use, compatibility, privacy, and security as sub-dimensions of attitude, and the model itself was validated by results of confirmatory factor analysis. The goodness of fit indices was found to be statically sufficient ($\chi 2$ /df = 1.99; RMSEA= .06, RMR= .09, SRMR= .05, NFI=.97, NNFI= .98, CFI= .99, GFI= .93, AGFI= .90). The confirmatory factor analysis validated the structure of research model.

Reliability of the adapted scale

To examine the reliability of the scale and its subscales, we considered the internal consistency with Cronbach's alpha. Table 3 displays the results of Cronbach's alpha.

Table 3: The scale's and subscales' reliability analysis

Scale	Number of Items	Cronbach's Alpha
Usefulness	3	.876
Ease of Use	2	.797
Compatibility	2	.909
Privacy	2	.839
Security	2	.881
Attitude	2	.906
Total	13	.896

The Cronbach Alpha Coefficient for the whole scale is .896, as seen in Table 3. According to Pallant (2016, p. 90), the ideal value for Cronbach Alpha is .70. Therefore, the internal consistency of scale is high enough. Moreover, the Cronbach Alpha Coefficient of all subscales was higher than .70, indicating the scale is reliable overall.

Analysis

Each participant's scores of online shopping sub-dimesions and online shopping attitudes regarding e-TAM were obtanied by the addition of answers given to the scale. The data analysis of the research includes an independent sample t-test and multiple regression analysis. To examine whether attitudes of generations Y and Z towards online shopping statistically differ within the scope of sub-dimensions of e-

TAM, an independent sample t-test was performed. Standard multiple regression analysis was used to find the best predictor regarding online shopping attitudes of generations Y and Z. Before the performed standard multiple regression analysis, the preliminary analyses were tested. The preliminary analysis of multiple regression are outliers, sample size, multicollinearity, singularity, normality, linearity, homoscedasticity, and independence of residuals Pallant (2016). We found that there is no violation of these assumptions.

The tests of the hypotheses 1 through 5

To test hypotheses 1 through 5, we used independent samples t-tests. The results of the tests for the differences in attitudes and its sub-dimensions of generations Y and Z towards online shopping are displayed in Table 4.

Table 4: The results of independent samples t-test for the differences in attitudes

	Generations	$\bar{X}$	SD	df	t	p	η^2
Attitude	Z	10.562	2.782	999	.402	.688	-
	Y	10.490	2.903				
Usefulness	Z	17.260	3.735	922.268	-.333	.739	-
	Y	17.340	4.500				
Ease of Use	Z	10.372	2.858	999	-2.691	.007	.007
	Y	10.854	2.806				
Compatibility	Z	9.235	3.263	999	-.633	.527	-
	Y	9.365	3.208				
Privacy	Z	7.729	2.994	999	-.855	.392	-
	Y	7.895	3.137				
Security	Z	8.981	2.527	999	.126	.900	-
	Y	8.960	2.791				

As seen in Table 4, although Gen Z has ($\bar{X}$= 10.562, SD=2.782) more positive attitudes towards online shopping than Gen Y ($\bar{X}$= 10.490, SD= 2.903), there is no significant difference in attitudes towards online shopping between Gen Y and Gen Z (tatt. (999) = .402, p= .688). Furthermore, there is no any significant difference in usefulness, compatibility, privacy and security for Gen Y and Gen Z (tuse (922.268) = -.333, p= .739; tcomp. (999) = -.633, p= .527; tpri. (999) = -.855, p= .392; tsec. (999) = .126, p= .900). On the contrary, Gen Y ($\bar{X}$= 10.854, SD= 2.806) has more tendency to online shopping than Gen Z has in terms of the ease of use ($\bar{X}$= 10.372, SD= 2.858). There is a significant difference in score for Gen Y and Z regarding

ease of use (tease. (999) = -2.601, p < .008, Ƞ2= .007). However, the magnitude of the differences in the means is very small (Ƞ2= .007). Therefore, the statistical difference is not regarded as statistically meaningful. Overall results indicate that there is not a difference in attitudes of generations Y and Z towards online shopping within the scope of sub-dimensions of e-TAM (See Table 4). These findings showed that all hypotheses through h1 to h5 were rejected.

On the other side, it is because any statistically meaningful result has not been found (Hypotheses 1 through 5) between generations Y and Z within the scope of sub-dimensions of e-TAM, age has been inspected to see whether any difference shows up or not. Accordingly, the farthest ages of two generational groups (17-18 ages for generation Z having 175 members and 25-34 ages for generation Y having 88 members) have been examined through independent samples t-tests in terms of the attitudes toward online shopping to control if any statistically meaningful difference can be found. However, in the analysis, examining members aged 17-18 in generation Z and members aged 25-34 in generation Y, any statistically meaningful result has not been obtained.

The test of hypothesis 6

To test the sixth hypothesis, we conducted standard multiple regression for generations Y and Z separately. Therefore, we split the data into two generations. In the first data set, there were 531 students belonged to generation Z. Of the total sample, 10 students' response were detected as missing values and abnormal responses and 10 were determined as multivariate outliers. Therefore, we excluded 20 students' response from the data set. The sample size decreased to 511. On the other hand the second data set were composed of 500 students belonged to generation Y. 20 students' response were detected as missing values and abnormal responses. 6 students were determined as multivariate outliers. Therefore, we excluded 26 students' response from the data set. The sample size decreased to 474. In this part, first the results of standard multiple regression for Gen Z are presented. Then, the results of standard multiple regression for Gen Y are shared.

Findings of the regression analysis for Gen Z

Table 5 displays the results of the standard analysis performed to determine the best predictor of attitude towards online shopping for Gen Z.

As it can be seen in Table 5, standard multiple regression analysis involved all the independent variables (i.e., usefulness, ease of use, compatibility, privacy, and security) being entered into the equation at once. The model in the current study for predicting attitudes of Gen Z towards online shopping is

statistically significant (R= .80; R^2= .64; p <0,001). All independent variables explained 80% of the variance in attitudes of Gen Z towards online shopping.

Table 5: The multiple regression analysis to predict Gen Z's attitudes towards online shopping

Model	Variables	R	R^2	Δ R^2	R^2_{ch}	F_{ch}	Sd	B	SE	β	t	p<
	Constant	0.802	.642	.639	.642	181.443	5/505	.300	.411		.730	.466
	Usefulness							.228	.028	.294	8.211	.000
	Ease of Use							.129	.033	.131	3.890	.000
	Compatibility							.342	.029	.404	11.822	.000
	Privacy							-.004	.027	-.005	-.164	.870
	Security							.207	.034	.188	6.057	.000
R= .80, R^2= .64, Δ R^2= .64 , $F_{(5,505)}$= 181.443, p<.001												

According to standardized regression coefficients, of these five variables, compatibility made the largest unique contribution (β =.404). Then usefulness made the second-largest contribution (β =.294) to attitudes. The security made the third largest contribution (β =.188) to attitudes. The ease of use made the fourth-largest contribution (β =.131) while Privacy made the least contribution (β =.005) to attitudes. When the t-test results for the significance of the regression coefficients were examined, it is observed that usefulness, ease of use, compatibility, and security are significant predictors (p <.001) whereas privacy does not make a statistically significant contribution (p= .870). These findings showed that h6a, h6b, h6c and h6e were accepted but h6d was rejected for Gen Z. In other words, privacy has not any effect on attitude whereas usefulness, ease of use, compatibility and security have an effect on attitudes.

Findings of the regression analysis for Gen Y

Table 6 shows the results of the standard analysis performed to determine the best predictor of attitude towards online shopping for Gen Y.

As can be seen in the Table 6, our model, which includes usefulness, ease of use, compatibility, privacy, and security to predict attitudes of Gen Y towards online shopping, is significant (R= 0,83; R^2= 0,68; p <0,001). All independent variables explained 83% of the variance in attitudes of Gen Y towards online shopping. This value is higher than the explained variance in attitudes of Gen Z towards online shopping.

Table 6: The multiple regression analysis to predict Gen Y's attitudes towards online shopping

Model	Variables	R	R^2	Δ R^2	R^2_{ch}	F_{ch}	Sd	B	SE	β	t	p<
	Constant	0.826	.683	.679	.683	199.205	5/463	-.102	.372		-.273	.785
	Usefulness							.245	.022	.372	10.981	.000
	Ease of Use							.133	.036	.129	3.689	.000
	Compatibility							.299	.030	.330	10.121	.000
	Privacy							.019	.026	.021	.730	.466
	Security							.220	.033	.211	6.559	.000
R= .83, R^2= .68, Δ R^2= .68 , $F_{(5,463)}$= 199.205, p<.001												

From the standardized regression coefficients of these five variables are analyzed, it is found that the usefulness makes the largest unique contribution (β =.372) while the compatibility makes the second-largest contribution (β =.330), the security made the third largest contribution (β =.211), and the ease of use made the fourth-largest contribution (β =.129) to attitudes. Privacy makes the least contribution (β =.021) to attitudes. According to the t-test results for the significance of the regression coefficients, it is found that usefulness, ease of use, compatibility, and security were significant predictors (p <.001) whereas privacy does not make a statistically significant contribution (p= .466). These findings showed that h6a, h6b, h6c and h6e were accepted but h6d was rejected for Gen Y. In other words, privacy has not any effect on attitude whereas usefulness, ease of use, compatibility and security have an effect on attitudes.

Taking all multiple regression analyses for Gen Z and Y into account, we can infer that the relative importance order of the predictor on Gen Y and Z's attitudes towards online shopping are almost the same. The relative importance order of the predictors on Gen Z's attitudes towards online shopping follows the sequence of compatibility, usefulness, security, ease of use, and privacy while the relative importance order of the predictor on Gen Y's attitudes towards online shopping follows the sequence of usefulness, compatibility, security, ease of use and privacy. Only the first predictor which made the largest contribution was different. Participants belonging to Gen Z considered compatible to prefer online shopping while participants belonging to Gen Y paid attention to the usefulness of online shopping. In addition, for both Gen Y and Z privacy do not make any statistically significant contribution but other variables made a statistically significant contribution to the attitude. In sum, the best predictor variable differs regarding online shopping attitudes of generations Y and Z.

The test of hypothesis 7

To test the seventh hypothesis, we conducted independent samples t-tests for generations Y and Z. The results of the tests for the differences in attitudes of generations Y and Z towards online shopping interms of gender are displayed in Table 7. As seen in Table 7, there is no significant difference in usefulness, ease of use, compatibility, privacy, and attitude for males and females. Besides, there is a significant difference in scores for males and females in terms of security (t(993)=2.631; p=.009; Ŋ2= .16). The magnitude of the differences in the means is quite large. Therefore, the statistical difference is regarded as statistically meaningful. These findings showed that h7 was rejected. To put it differently, the security sub-dimension is more determinative in women's attitudes toward online shopping. Items related to privacy were reverse coded so we reverted them opposite before the independent samples t-test runned.

Table 7: The results of independent samples t-test for the differences in attitudes

	Gender	$\bar{X}$	SD	df	t	p	η^2
Usefulness	Male	17.32	4.27	993	.210	.834	-
	Female	17.27	3.93				
Ease of Use	Male	10.65	2.88	993	.589	.556	-
	Female	10.54	2.81				
Compatibility	Male	9.27	3.25	993	-.204	.839	-
	Female	9.31	3.22				
Privacy	Male	7.72	2.98	993	-.891	.373	-
	Female	7.90	3.13				
Security	Male	9.19	2.81	993	2.631	.009	0.16
	Female	8.75	2.55				
Attitude	Male	10.47	2.92	992.504	-.596	.552	-
	Female	10.58	2.76				

CONCLUSION AND DISCUSSION

The purpose of this study is to reveal whether the attitudes of generations Y and Z towards online shopping differ in the scope of the e-TAM. Technology acceptance is an indispensable requirement for online shopping activities. Especially, Web technologies refer to one of the most prominent and important tools in the utilization of online shopping practices. Therefore, in both international and national literature,

most of the researchers focused on the TAM in the inspection of consumers' attitudes, intentions, and behaviors towards online shopping.

The present study focuses on the TAM and its enhanced version named e-TAM in the inspection of online shopping attitudes of generations Y and Z. In the e-TAM, sub-dimensions differ from study to study as each research adds or excludes some factors according to its subject or scope. In this respect, in the previous research, covered in both national and international literature focusing on the different premises of e-TAM concerning attitudes towards online shopping preferences, various results came out.

However, in this study, the attitudes of Gen Y and Z towards online shopping have been discussed in the scope of the e-TAM and a model proposed by Vijayasarathy (2004). Part of Vijayasarathy's enhanced model, which only comprises attitudinal patterns regarding online shopping, consists of 5 sub-dimensions including perceived usefulness, perceived ease of use, compatibility, privacy, and security which are the main benchmarks in the hypotheses of our research.

As a result of the analyses performed in this study, we found that there is not any significant difference in perceived usefulness for generations Y and Z in online shopping preferences. However, it was also found that Gen Y has more tendency than Gen Z to use online shopping in terms the perceived ease of use. Although the difference was statistically significant, the magnitude of the difference in the means was very small. Furthermore, as for compatibility, the results showed that there is not any significant difference between Gen Y and Z concerning online shopping preferences. Nevertheless, no significant difference in online shopping preferences has been found for Gen Y and Z in terms of privacy. Regarding security, analysis once again revealed that there is not any significant difference between Gen Y and Z in online shopping preferences. Considering the results of hypotheses, ranged between h1 and h5 just except for h2 which showed that there is not a significant difference in the online shopping attitudes of Gen Y and Z in terms of sub-dimensions of e-TAM, age closeness, and similarity in the socio-economic conditions may have been regarded as the fundamental reasons of these results. However, results also show that perceived ease of use is relatively more important for Gen Y than Gen Z over the attitudes toward online shopping. This result may stem from the reason that Gen Z is considered more tech-savvy and technically more competent in the usage of technologies compared to Gen Y. This means that Gen Y minds ease of use while experiencing technologies more than Gen Z does. As seen in Table 1, terms defined for different generations are varying a lot. Also, time differences between generations are so close (Rothman, 2016; Törőcsik et al., 2014). Because of those facts, we may have not found any statistical differences between the online shopping attitudes of Gen Y and Gen Z. This is why maybe defining time differences among different

generations can be considered in a broader sense. Also, consistency is important in the definition of generation among different scholars and studies.

On the other hand, it has also been found that the relative importance regarding the order of the predictors of Gen Z's attitudes toward online shopping is as follows: a) Compatibility, b) perceived usefulness, c) security, d) perceived ease of use, e) privacy. Whereas the relative importance concerning the order of the predictors on Gen Y's attitudes towards online shopping is as follows: a) Perceived usefulness, b) compatibility, c) security, d) perceived ease of use, e) privacy.

In this respect, in consideration of this ordering, only the first predictor variable, which made the largest contribution, appeared different. Participants belonging to Gen Z considered compatibility as the most important factor to prefer online shopping whereas participants of Gen Y paid attention to usefulness the most regarding the preference of online shopping. However, in most of the studies from the literature, generally perceived usefulness was found as the best predictor of attitudes toward online shopping (e.g., Çakır, 2009; Henderson and Divett, 2003; Koufaris, 2002; Vijayasarathy, 2004). Therefore, it can be inferred that the finding related to the best predictor of Gen Y's attitudes towards online shopping was consistent with other research findings which focus on participants belonging to Gen Y or possibly Gen X. In this case, it can be inferred that the best predictor variable of online shopping attitude for Gen Y and possibly Gen X is perceived usefulness whereas compatibility is the best predictor variable for Gen Z towards online shopping. The reason for that preference regarding both generations might be that Gen Z already accepts online shopping practices because they believe that web technologies and online shopping environments are easy to use, secure enough, and would make a meaningful contribution to them while they shop. Also, maybe Gen Z already admits a little portion of violation of privacy since they are born into environments of social networks, which obtain their bunch of personal information in the first place. Therefore, the generation just cares about compatibility considering whether online shopping would fit their way of life, and serve their priorities and necessities or not. As for Gen Y, these people most probably mind the benefits of online shopping activities and related technologies used before anything else. On the other side, this generation is also tech-savvy and gets used to utilizing information technologies and the Internet which prevent them from fearing privacy and security issues of online shopping environments in which they already spend time for long periods. Thus, they do not consider whether usage of such platforms would be easy to use or not since they already use all of them. For this reason, they merely care about perceived usefulness.

Finally, regarding the gender of both generations in the attitudes toward online shopping within the scope of sub-dimensions of TAM, it has been obtained that there is no significant difference in usefulness,

ease of use, compatibility, privacy, and attitude for males and females. Besides, there is a significant difference in scores for males and females in terms of security. Accordingly, women mind security relatively more in their online shopping activities compared to men. This result might mean that women find offline shopping patterns more secure even though they are quite competent users of online environments.

As a result, business organizations should be striving to invest in innovative technologies such as the Internet and the Web to be able to get up to date in terms of online shopping trends and changing marketing conditions in the light of technology. Accordingly, inspection and understanding of implications that are obtained from marketing conditions in which young are dominant and leading factors, matters for business organizations. In brief, this study is believed to make contributions to the field along with its various and unique perspectives. In such a fast-changing world atmosphere utilizing new technologies, marketing environments and professionals are having difficulty in predicting consumption patterns of especially young generations who are exposed to a constant change process in the light of advanced digital technologies. In this sense, regarding online shopping acceptance patterns as linked with the adoption of Internet-driven technologies by young consumers, this study offers some implications, which will be useful for the marketing world.

YAZAR BEYANI / AUTHOR STATEMENT

Araştırmacılar makaleye ortak olarak katkıda bulunduğunu bildirmiştir. Araştırmacılar herhangi bir çıkar çatışması bildirmemiştir. Bu çalışma için Anadolu Üniversitesi Etik Kurulunun 12/06/2018 tarihli ve 114410 nolu kararı ile etik kurul onayı alınmıştır.

Researchers have jointly contributed to the article. Researchers have not declared any conflict of interest. Ethics committee approval was provided for this study by the Ethics Committee of Anadolu University dated 26/12/2018 and numbered 114410.

REFERENCES

Adriana-Camelia, B. (2015). Next generations of consumers–challenges and opportunities for brands. *Вісник Київського національного університету ім. Тараса Шевченка. Серія: Економіка*, *6*(171), 6-10. doi: 10.17721/17282667.2667-2015/171-6/1

Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences, 30*(2), 361-391. doi: 10.1111/j.1540-5915.1999.tb01614.x

Akhlaq, A., & Ahmed, E. (2016). Gender differences among online shopping factors in Pakistan. *Organizations and Markets in Emerging Economies*, *7*(1), 74-86. doi: 10.15388/omee.2016.7.1.14216

Aktan, C. C., & Vural, İ. Y. (2016). Bilgi toplumu, yeni temel teknolojiler ve yeni ekonomi. *Yeni Türkiye, 88*(1), 1-37.

Alch, M. L. (2000). The echo-boom generation: A growing force in American society. *The Futurist, 34*(5), 42-46.

Altuntuğ, N. (2012). Kuşaktan kuşağa tüketim olgusu ve geleceğin tüketici profili. *Organizasyon ve Yönetim Bilimleri Dergisi, 4*(1), 203-212.

Arı, E., & Yılmaz, V. (2015). Üniversite öğrencilerinin online yemek siparişi davranışlarının teknoloji kabul modeliyle araştırılması. *Uluslararası Alanya İşletme Fakültesi Dergisi, 7*(2), 65-84.

Ashraf, A. R., Thongpapanl, N., & Auh, S. (2014). The application of the technology acceptance model under different cultural contexts: The case of online shopping adoption. *Journal of International Marketing, 22*(3), 68-93. doi: 10.1509/jim.14.0065

Ayhün, S. E. (2013). Kuşaklar arasındaki farklılıklar ve örgütsel yansımaları. *Muğla Sıtkı Koçman Üniversitesi İktisadi ve İdari Bilimler Fakültesi Ekonomi ve Yönetim Araştırmaları Dergisi, 2*(1), 93-112.

Barkhi, R., Belanger, F., & Hicks, J. (2008). A model of the determinants of purchasing from virtual stores. *Journal of Organizational Computing and Electronic Commerce, 18*(3), 177-196. doi: 10.1080/10919390802198840

Baydaş, A., Sezer, A., & Kanoğlu, M. F. (2021). Investigation of the effects of hedonic consumption reasons on voluntary simplicity lifestyle within the scope of consumer purchasing behavior in terms of generations x, y, z. *Journal of Current Researches on Social Sciences, 11*(4), 451-474. doi: 10.26579/jocress.449

Bejtkovský, J. (2016). The current generations: The Baby Boomers, X, Y and Z in the context of human capital management of the 21st century in selected corporations in the Czech Republic. *Littera scripta, 9*(2), 25-45.

Bencsik, A., Horváth-Csikós, G., & Juhász, T. (2016). Y and Z generations at workplaces. *Journal of Competitiveness, 8*(3), 89-106.

Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly, 25*(3), 351-370. doi: 10.2307/3250921

Bhattacherjee, A., & Sanford, C. (2009). The intention–behaviour gap in technology usage: The moderating role of attitude strength. *Behaviour & Information Technology, 28*(4), 389-401. doi: 10.1080/01449290802121230

Bilgiç, H. G., Duman, D., & Seferoğlu, S. S. (2011). Dijital yerlilerin özellikleri ve çevrimiçi ortamların tasarlanmasındaki etkileri. *Akademik Bilişim, 2*(4), 1-7.

Bruner II, G. C., & Kumar, A. (2005). Explaining consumer acceptance of handheld internet devices. *Journal of Business Research, 58*(5), 553-558. doi: 10.1016/j.jbusres.2003.08.002

Canavan, B. (2020). *Contemporary Consumption, Consumers and Marketing: Cases from Generations Y and Z* (1st Ed.). New York: Routledge.

Cengiz, E., & Şekerkaya, A. (2010). İnternet kullanıcılarının internetten alış-verişe yönelik satın alma karar süreçlerinin incelenmesi ve kullanım yoğunlukları açısından sınıflandırılması üzerine bir araştırma. *Öneri*, *9*(33), 33-49. doi: 10.14783/od.v9i33.1012000147

Cennamo, L., & Gardner, D. (2008). Generational differences in work values, outcomes and person-organisation values fit. *Journal of Managerial Psychology*, *23*(8), 891-906. doi: 10.1108/02683940810904385

Chang, W. L., & Chen, L. M. (2021). Analyzing the omni-channel shopper journey configuration of generations Y and Z. *Journal of Organizational and End User Computing*, *33*(6), 1-18. doi: 10.4018/JOEUC.293273

Chau, Y., & Hu, J. H. (2001). Information technology acceptance by individual professionals: A model comparison approach. *Decision Sciences*, *32*(4), 699-719. doi: 10.1111/j.1540-5915.2001.tb00978.x.

Chen, L. D., & Tan, J. (2004). technology adaptation in e-commerce: Key determinants of virtual stores acceptance. *European Management Journal*, *22*(1), 74-86. doi: 10.1016/j.emj.2003.11.014

Chiu, C. M., Lin, H. Y., Sun, S. Y., & Hsu, M. H. (2009). Understanding customers' loyalty intentions towards online shopping: An integration of technology acceptance model and fairness theory. *Behaviour & Information Technology*, *28*(4), 347-360. doi: 10.1080/01449290801892492

Çakır, C. B. (2009*). İnternet üzerinden satın alma davranışının incelenmesi ve bir uygulama* (Unpublished Master' Thesis). İstanbul Technical University, İstanbul.

Çelik, H. E. (2009). *Yapısal eşitlik modellemesi ve bir uygulama: Genişletilmiş online alışveriş kabul modeli* (Unpublished Doctoral Thesis). Eskişehir Osmangazi University, Eskişehir.

Dalcher, I., & Shine, J. (2003). Extending the new technology acceptance model to measure the end user information systems satisfaction in a mandatory environment: A bank's treasury. *Technology Analysis & Strategic Management*, *15*(4), 441-455. doi: 10.1080/0953732030000136033

Davis, F. D. (1986). *A technology acceptance model for empirically testing new enduser information systems: Theory and results* (Unpublished Doctoral Thesis). Wayne State University, Detroit, Michigan.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319-340. doi: 10.2307/249008

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, *35*(8), 982-1003. doi: 10.1287/mnsc.35.8.982

Dick, S. D. (2019). *A study of the generational differences in work values of generations X, Y, and Z* (Unpublished Doctoral Thesis). Northcentral University, San Diego, California.

Ersöz, S., & Askeroğlu, E. D. (2020). Generations X, Y, Z and their perception of e-government services: Case of Turkey. *Online Journal of Communication and Media Technologies*, *10*(1), 1-13. doi: 10.29333/ojcmt/6428

Faqih, K. M. S., & Jaradat, M. I. R. M. (2015). Assessing the moderating effect of gender differences and individualism-collectivism at individual-level on the adoption of mobile commerce technology: TAM3 perspective. *Journal of Retailing and Consumer Services, 22*, 37-52. doi: 10.1016/j.jretconser.2014.09.006

Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing, 56*(1), 6-21. doi: 10.1177/002224299205600103

Freedman, D. (2012). Web 2.0 and the death of the blockbuster economy. In C. James, N. Fenton, D. Freedman (Ed.), *Misunderstanding the Internet* (pp. 69-94) . London and New York: Routledge.

Gefen, D. (2000). E-commerce: The role of familiarity and trust. *Omega, 28*(6), 725-737. doi: 10.1016/S0305-0483(00)00021-9

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly, 27*(1), 51-90. doi: 10.2307/30036519

Gültaş, M. (2020). *Teknoloji kabul modeli çerçevesinde internet üzerinden alışveriş davranışının incelenmesi* (Unpublished Master' Thesis). İnönü University, Malatya.

Goessling, M. (2017). *Attraction and retention of generations x, y and z in the workplace*. Integrated Studies. 66. Recieved from https://digitalcommons.murraystate.edu/bis437/66.

Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research, 62*(5), 565-571. doi: 10.1016/j.jbusres.2008.06.016

Hassan, M., Kazmi, S. S. A. S., & Padlee, S. F. (2019). Technology acceptance model (TAM) and dynamics of online purchase adaptability. *International Journal of Recent Technology and Engineering. 8*(1), 390-402.

Henderson, R., & Divett, M. J. (2003). Perceived usefulness, ease of use and electronic supermarket use. *International Journal of Human-Computer Studies, 59*(3), 383-395. doi: 10.1016/S1071-5819(03)00079-X

Hernandez, B., Jimenez, J., & Martín, M. J. (2009). Adoption vs acceptance of e-commerce: Two different decisions. *European Journal of Marketing, 43*(9/10), 1232-1245. doi: 10.1108/03090560910976465

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. New York: Vintage Books.

Hsu, C. L., & Lu, H. P. (2007). Consumer behavior in online game communities: A motivational factor perspective. *Computers in Human Behavior, 23*(3), 1642-1659. doi: 10.1016/j.chb.2005.09.001

Huang, L., Lu, M. T., & Wong, B. K. (2003). The impact of power distance on email acceptance: Evidence from the PRC. *Journal of Computer Information Systems, 44*(1), 93-101. doi: 10.1080/08874417.2003.11647556

Hysa, B., Karasek, A., & Zdonek, I. (2021). Social media usage by different generations as a tool for sustainable tourism marketing in society 5.0 idea. *Sustainability, 13*(3), 1-27. doi: 10.3390/su13031018

Kalaycı, S., & Kökçel, E. (2017). Y kuşağının teknoloji ile ilişkisi: Ön lisans öğrencileri üzerinde bir araştırma. *Bilge Uluslararası Sosyal Araştırmalar Dergisi, 1*(1), 79-98.

Keisidou, E., Sarigiannidis, L., & Maditinos, D. (2011). Consumer characteristics and their effect on accepting online shopping, in the context of different product types. *International Journal of Business Science & Applied Management, 6*(2), 31-51.

Kim, D. J., Ferrin, D., & Rao, R. (2003). An ınvestigation of consumer online trust and purchase-repurchase ıntentions.In *International Conference on Information Systems* (pp. 353-365). Seattle, Washington: Research Collection Lee Kong Chian School of Business.

Kohli, A. (1989). Determinants of influence in organizational buying: A contingency approach. *Journal of Marketing, 53*(3), 50-65. doi: 10.1177/002224298905300307

Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behavior. *Information Systems Research, 13*(2), 205-223. doi: 10.1287/isre.13.2.205.83

Kutlák, J. (2019). Generations Y and Z in the workplace: Perception of teamwork. *ACC journal, 25*(2), 65-77. doi: 10.15240/tul/004/2019-2-005

Kutlák, J. (2021). Individualism and self-reliance of Generations Y and Z and their impact on working environment: An empirical study across 5 European countries. *Problems and Perspectives in Management, 19*(1), 39-52. doi:10.21511/ppm.19(1).2021.04

Kuyucu, M. (2017). Y kuşağı ve teknoloji: Y kuşağının iletişim teknolojilerini kullanım alışkanlıkları. *Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi, 5*(2), 845-872. doi.org/10.19145/e-gifder.285714

Lancaster, L. C., & Stillman, D. (2002). *When generations collide: Who they are. Why they clash. How to solve the generational puzzle at work*. New York: HarperCollins Publishers Inc.

Law, M., & Ng, M. (2016). Age and gender differences: Understanding mature online users with the online purchase intention model. *Journal of Global Scholars of Marketing Science, 26*(3), 248-269. doi: 10.1080/21639159.2016.1174540

Laor, T., & Galily, Y. (2022). Who'S clicking on on-demand? Media consumption patterns of generations Y & Z. *Technology in Society, 70*, 1-8. doi: 10.1016/j.techsoc.2022.102016

Liao, Z, & Cheung, M. T. (2001). Internet-based e-shopping and consumer attitudes: An empirical study. *Information & Management, 38*(5), 299-306. doi: 10.1016/S0378-7206(00)00072-0

Martin, C. A., & Tulgan, B. (2002). *Managing the generation mix: From collision to collaboration*. Ahherst, Massachusetts: HRD Press Inc.

Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research, 2*(3), 173-191. doi: 10.1287/isre.2.3.173

McCrindle, M., & Wolfinger, E. (2009). *The ABC of XYZ: Understanding the global Generations* (1st Edition). Sydney: McCrindle Research, Bella Vista.

Miandari, G. A. K. D. D., Yasa, N. N. K., Wardana, M., Giantari, I. G. A. K., & Setini, M. (2021). Application of technology acceptance model to explain repurchase intention in online shopping consumers. *Webology, 18*(1), 247-262. doi: 10.14704/WEB/V18I1/WEB18087

Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research, 2*(3), 192-222. doi: 10.1287/isre.2.3.192

Morsümbül, Ş. (2014). *Değerlerin kuşaklar arası değişimi: Ankara örneği* (Unpublished Doctoral Thesis). Hacettepe University, Ankara.

Nazari, M., & Hafezi, H. (2013). Generational differences in purchasing decision making process: Study of buying cell phone in Tehran. *International Journal of Multidisciplinary Thought, 3*(3), 21–27.

Nuzulita, N., & Subriadi, A. P. (2020). The role of risk-benefit and privacy analysis to understand different uses of social media by Generations X, Y, and Z in Indonesia. *The Electronic Journal of Information Systems in Developing Countries, 86*(3), 1-17. doi: 10.1002/isd2.12122

Oblinger, D., & Oblinger, J. (Ed.). (2005). *Educating the Net Generation*. Washington, D.C.: EDUCAUSE.

O'cass, A., & Fenech, T. (2003). Web retailing adoption: Exploring the nature of internet users web retailing behaviour. *Journal of Retailing and Consumer services, 10*(2), 81-94. doi: 10.1016/S0969-6989(02)00004-8

Ofori, D., & Appiah-Nimo, C. (2019). Determinants of online shopping among tertiary students in Ghana: An extended technology acceptance model. *Cogent Business & Management, 6*(1), 1-20. doi: 10.1080/23311975.2019.1644715

Oğuz, G. V. (2017). Investigation of the effect of retro marketing on brand loyalty over generations X, Y & Z. *International Journal of Disciplines Economics & Administrative Sciences Studies, 3*(1), 48-60.

Omeragić, I. (2021). *Digital day in life: Differences between generations X, Y and Z in the use of social media* (Unpublished Doctoral Thesis). Rochester Institute of Technology, Croatia.

Pallant, J. (2016). *SPSS survival manual* (6th Edition). Crows Nest, Australia: Allen & Unwin.

Park, J., Lee, D., & Ahn, J. (2004). Risk-focused e-commerce adoption model: A cross-country study. *Journal of Global Information Technology Management, 7*(2), 6-30. doi: 10.1080/1097198X.2004.10856370

Paulienė, R., & Sedneva, K. (2019). The influence of recommendations in social media on purchase intentions of generations Y and Z. *Organizations and Markets in Emerging Economies, 10*(2), 227–256. doi: https://doi.org/10.15388/omee.2019.10.12

Pishchik, V. (2020). Features of the mentality of generations X, Y, Z. *E3S Web Conferences, 210, 20007*. doi: 10.1051/e3sconf/202021020007

Prensky, M. (2005). Listen to the natives. *Educational Leadership, 63*(4), 8-13.

Portz, K. S. (2000). *The effect of webtrust on the perceived trustworthiness of a web site and the utilization of electronic commerce* (Unpublished Doctoral Thesis). The Graduate College at the University of Nebraska, Lincoln, Nebraska.

Reeves, T. C., & Oh, E. (2008). Generational differences. In J. M. Spector, M.D. Merrill, J. V. Merrienboer & M. P. Driscoll (Ed.), *Handbook of research on educational communications and technology* (pp. 295-303). New York: Taylor & Francis Group, LLC.

Rothman, D. (2016). *A Tsunami of learners called Generation Z*. Retrieved from http://www. mdle. net/JoumaFA_Tsunami_of_Learners_Called_Gen_Z. pdf.

Sessa, V. I., Kabacoff, R. I., Deal, J., & Brown, H. (2007). Generational differences in leader values and leadership behaviors. *The Psychologist-Manager Journal, 10*(1), 47–74. doi: 10.1080/10887150709336612

Seyhun, S., & Kurtuldu, G. (2020). Genişletilmiş teknoloji kabul modeli bağlamında mobil alışveriş uygulamalarının benimsenmesini etkileyen faktörler. *Trakya Üniversitesi Sosyal Bilimler Dergisi*, *22*(1), 599-627. doi: 10.26468/trakyasobed.617630

Shams, G., Rehman, M. A., Samad, S., & Oikarinen, E. L. (2020). Exploring customer's mobile banking experiences and expectations among generations X, Y and Z. *Journal of Financial Services Marketing, 25*(1), 1-13. doi: 10.1057/s41264-020-00071-z

Shi, W., Wu, P., Zhou, W., & Chen, J. (2009). Gender differences in purchase intention on mobile data services. In *International Joint Conference on Computational Sciences and Optimization*. (pp. 773-777. IEEE.

Shih, H. P. (2004). An empirical study on predicting user acceptance of e-shopping on the Web. *Information & Management, 41*(3), 351-368. doi: 10.1016/S0378-7206(03)00079-X

Smola, W. K., & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *23*(4), 363-382. doi.org/10.1002/job.147

Stobiecka, J., & Pangsy-Kania, S. (2021). Managing stress as a key element of the competition in the workplace based on the example of generations Y and Z. In *38th International Business Information Management Association Conference*. International Business Information Management Association.

Tapscott, D. (1998). *Growing up digital: the rise of the Net generation*. New York: McGraw-Hill.

Tapscott, D. (2013). *Net kids: Die digitale Generation erobert Wirtschaft und Gesellschaft*. Wiesbaden: Gabler GmbH.

Thoumrungroje, A. (2021). Drivers of e-commerce continuance intention: A comparison across Baby Boomers, generations X, Y, and Z in Thailand. *Chulalongkorn Business Review. 43*(2), 168, 21-46.

Todorova, G. (2022). *Analysis of the perceptions of Generations X, Y, and Z towards media disinformation in Bulgaria* (Unpublished Master' Thesis). Universitat Pompeu Fabra, Barcelona.

Tong, X. (2010). A cross-national investigation of an extended technology acceptance model in the online shopping context. *International Journal of Retail & Distribution Management, 38*(10), 742-759. doi: 10.1108/09590551011076524

Townsend, A. M., Demarie, S. M., & Hendrickson, A. R. (2001). Desktop video conferencing in virtual workgroups: Anticipation, system evaluation and performance. *Information Systems Journal 11*(3), 213-227. doi: 10.1111/j.1365-2575.2001.00103.x

Törőcsik, M., Szűcs, K., & Kehl, D. (2014). How generations think: Research on generation Z. *Acta universitatis Sapientiae, communicatio, 1*(1), 23-45.

Tulgan, B. (2013). Meet Generation Z: The second generation within the giant" Millennial" cohort. *Rainmaker Thinking*. *125*, 1-13.

Tuomi, I., & Geser, H. (2005). Individual and Collective Life Options. In A. Zerdick, P. Arnold, K. Schrape, J. C. Burgelman, R. Silverstone (Ed.), *E-merging media: Communication and the media economy of the future* (pp. 213-214). Berlin Heidelberg: Springer-Verlag.

Valencia, D. C., Alejandro, V. A., Bran, L., Benjumea, M., & Valencia, J. (2019). Analysis of e-commerce acceptance using the technology acceptance model. *Scientific papers of the University of Pardubice. Series D, Faculty of Economics and Administration. 45*, 174-185.

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research, 11*(4), 342-365. doi: 10.1287/isre.11.4.342.11872

Vijayasarathy, L. R. (2004). Predicting consumer intentions to use on-line shopping: The case for an augmented technology acceptance model. *Information & Management, 41*(6), 747-762. doi: 10.1016/j.im.2003.08.011

Yadav, R., & Mahara, T. (2019). An empirical study of consumers' intention to purchase wooden handicraft items online: Using extended technology acceptance model. *Global Business Review, 20*(2), 479-497. doi: 10.1177/0972150917713899

Yalçın, O., Sökmen, A. B., & Kulak, H. (2013). Kuşakların temel özellikleri ve hava harp okulu uygulamaları. *Yakın Dönem Türkiye Araştırmaları. 12*(24), 133-179.

Yılmaz, C., & Tümtürk, A. (2015). İnternet üzerinden alışveriş niyetini etkileyen faktörlerin genişletilmiş teknoloji kabul modeli kullanarak incelenmesi ve bir model önerisi. *Yönetim ve Ekonomi, 22*(2), 355-384. doi: 10.18657/yecbu.76242

Zemke, R., Raines, C, & Filipczak, B. (2000). *Generations at work: Managing the clash of veterans, boomers, Xers, and nexters in your workplace.* New York: AMACOM.

Zhang, Y. (2005). Age, gender, and Internet attitudes among employees in the business world. *Computers in Human Behavior, 21*(1), 1-10. doi: 10.1016/j.chb.2004.02.006