Determinants of Consumer Satisfaction of Mobile Commerce in Turkey[1]

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Abstract
The concept of customer satisfaction points out the satisfaction that customers gain from working with a business. In other words, the concept describes how satisfied customers are with their transaction and their overall experience with the company. In order to retain existing customers, spread brand awareness through them and convert current customers to loyal ones, customer satisfaction is a key requirement to be met. Any business entity attempts to reach high level of customer satisfaction through their customer relationship management activities.

Mobile commerce (M-commerce) are among young business entities that struggle with customer satisfaction concept known as M-satisfaction. M-commerce is the subsection of E-commerce that contains all E-commerce transactions that can be performed with the help of mobile (handheld) devices. The objective of the paper is to identify characteristics of M-commerce and to recognize factors that affect customer satisfaction (M-satisfaction) in M-commerce through well-founded empirical studies. Mobile user's discernments and satisfaction are clarified in regards to versatile trade in Turkey.

First, based on previous literature, the paper builds sets of customer satisfaction factors for both E-commerce and M-commerce. Second, features of M-commerce are identified by comparing it with current E-commerce. Third, significant factors that affect M-satisfaction are examined by employing structural equation model. The data for the study have been collected through a self-administrated questionnaire where 204 respondents from Turkey (mainly from Istanbul city) have participated.

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According to the research findings, mobility, ease of use, security and privacy are positively correlated to customer satisfaction while both content reliability and service quality have no relationship with customer satisfaction. M-retailors and M-commerce service designers can utilize findings of this study to know about how to improve customer satisfaction level of their customers and as a result gain competitive advantage based on a better understanding of their customers' needs and expectations.

Keywords: *M-Commerce, E-Commerce, Structural Equation Model*

INTRODUCTION

The definition of Mobile Commerce (M-commerce) means using the mobile phone to accomplish any transaction to obtain goods or services. Nowadays the smartphones occupy a prominent place in people's lives. Smartphone is a mobile phone based on a mobile operating system with advanced computing capabilities and connectivity. In reality, the interaction between technologies such as the internet, mobile computing devices, and wireless networks (e.g. mobile network) simplifies the existence of M-commerce to offer many services to mobile consumers (Siau & Shen, 2003). M-commerce is strongly linked to Electronic Commerce (E-commerce) (Tiwari, Buse, & Herstatt, 2006). Whereas E-commerce provides "anytime" access to online services, M-commerce potentially allows users to perform online transactions "anytime and anywhere" (Zhang & Yuan, 2003). This concept of "anytime and anywhere" transacting and accessing important business information can be considered as one of the most significant advantages of M-commerce that draws the attention of businesses and their employees (Alfahl, Sanzogni, Houghton, & Sandhu, 2012).

Since the evolution of any nation depends on the M-commerce, it is clear that there is competitive market in all over the world. The number of M-stores has been increasing and competition grows rapidly. To maintain competitive advantage in the marketplace, the companies are looking new methods of service deliveries.

Moreover, Internet Live Stats' reports reveal that internet penetration rate in Turkey is (56 Million users) 58% (3.8% in 2000, 68.5% in 2016) from 2000 till 2016 (stats, 2018). The data lays bare that internet usage has been

rapidly growing in Turkey, and leads to development into national and international market for selling and exchanging goods. According to the statistics mentioned hereinabove, it is proven the success of M-commerce in Turkey and revealed excellent development since the beginning. Although there are many challenges in M-commerce in Turkey, the number of M-retailers and rate of adoption are increasing.

The reason why this impressive increase in the number of M-commerce and online shopping is hiding behind the existing broad range of goods and services. On the other hand, identifying factors influencing customer satisfaction in M-commerce platform and conducting appropriate strategies to employ them are considered as important factors in improving services provided by B2C organizations. The vast expansion of online shopping in Turkey highlights the noteworthiness of working on customer satisfaction topic, which is considered as a key factor in M-stores. The explosive growth of M- shopping in Turkey underlines the remarkable role of customer satisfaction as a vital factor in M-shops (Grönroos & Gummerus, 2014) stated that customer satisfaction plays a crucial role and is a useful tool for interpreting customers' responses and ideas in the long-term with respect to the evaluation cycle of usage, shopping, service or product consumption.

The main purpose of this research is to examine and identify the effects of factors on customer satisfaction as well as their relationships and the degree of influence on the Turkish M-commerce platforms. To show the effects of factors and to prove the hypothesis related with the customer satisfaction, as a sector, M-commerce has been chosen and one reason to choose this sector is due to the fact that it takes a big share from the market. In addition to this, M-commerce can be considered as one of the most famous platforms in Turkey. To analyse and to understand the situation in this sector, a questionnaire was conducted to collect the data. The findings of this study will make contributions to insights of predominant factors that affect online customer satisfaction in M-commerce of E-retailors in Turkey. The findings to improve customer satisfaction can facilitate better understanding of customers' needs, wants and expectation for those who gain competitive advantage.

REVIEW OF LITERATURE THEORETICAL BACKGROUND OF THE STUDY

There are several researches, which have been conducted in customer satisfaction in M-commerce, and various literature sources are available to study (e.g. Choi, Seol, Lee, Cho, & Park, 2008 & Lin, 2003). In order to understand similar areas of research in depth, it is important to review similar previous studies and develop a theoretical background for this research. Therefore, this chapter presents some definitions of M-commerce, along with its features and challenges, as well as the definition of customer satisfaction. In addition, it shows how consumer behavior is affected by M-commerce. Finally, the chapter comes to the end with identifying of several basic factors affecting customer satisfaction.

E-commerce is the concept used to define any economic activity, such as the sale of products and services over the Internet (Barnes, 2002; HU, 2006; Chan & Chong, 2013). Thus, M-commerce can be defined as an extension of E-commerce. As sharing basic business principles, the two concept are similar (Zhao, Lu, Zhang, & Chau, 2012). More precisely, M-commerce is a new type of E-commerce where all the transactions are linked via handheld devices and are interacting in a wireless mode (Lee, 2005). "M-commerce is not a 'better' E-commerce" (HU, 2006); however, M-commerce itself outperforms E-commerce in terms of interaction styles, usage patterns and the value chain (Lee, 2005). In addition to these, M-commerce provides users with anytime, anywhere access. From this point of view, there is restriction on time or geographic limitations as searching products from mobile devices. With the usage of M-commerce, data is transferred wirelessly between mobile phones and computers, enabling users to use services flexibly and without wired connection requirement (Hyeon joo, Jeewon, Sungjoo, Hyunmyung, & Yongtae, 2008). There are two user-oriented core-dimensions that M-commerce has advantage over E-commerce such as localability and mobility communication. IP devices offers mobility in M-data networks. They also employ geographical locating in systems or in user-network elements to pin-point cell (mobile). By the help of this mobile devices, the user can offer his/her geo-locations in localability communication or information payment. The dimensions create a range of distinctions between M-commerce and conventional E-commerce.

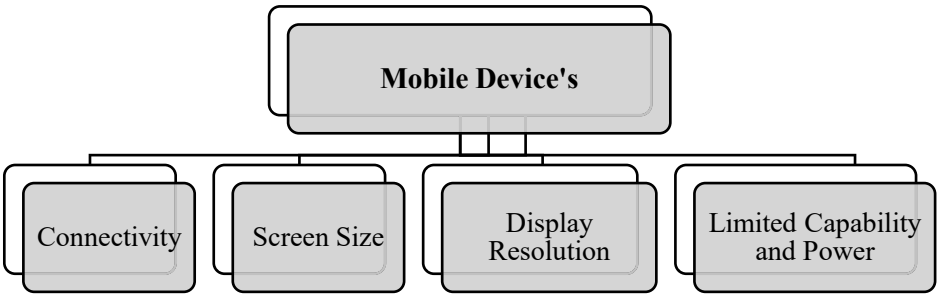
Table 1: The Distinction between M-Commerce and E-Commerce

Dimension	**E-Commerce**	**M-Commerce**
Core Dimensions		
Mobility	Limited: User can transact from location with Internet access	Ubiquitous: User can transact from anywhere with mobile network area
Localability	Client-specific: Client computer locatable via IP address	User-specific: User, device, and geographic location can be identified.
Behavioral, Strategic, and Leadership Dimensions		
Key customer concern	Money: Because of "free Internet" culture, E-commerce users are money conscious	Time: Evolving from mobile telephony culture, m-commerce users are time conscious. They are used to pay for mobile services.
Customer location and market served	Fixed Locations: Customers can be served at locations where they have Internet-linked computer access.	Ubiquitous and Global: Customers can be served anywhere within the mobile network coverage area.

Source: (DifferencesKey, 2008)

Mobile devices have many challenges such as software designing for mobile computing (Forman & Zahorjan, 1994), application development (Hyeon joo, Jeewon, Sungjoo, Hyunmyung, & Yongtae, 2008). Due to the fact that malicious spasms spring from PC to mobile phones and its applications, security is a critical part of protecting sensitive user-context and information. Mobile companies are aware of these facts and carry out the studies for the solution about security. The unique qualities of mobile business are several major difficulties for users such as physical security, secure data storage, multiple-user logging M-browsing, app-isolation, system updates (SU), m-device, coding issues, malware rise. Although there are serious threats, connectivity, screen size, display resolutions, and limited capability and power will be explained (Keengwe, 2014). Figure 1 illustrates the challenges here in below:

Figure 1: Challenges and Issues of Mobile Devices



Source: (Anh, 2015)

The wireless linking can contrast subjected on different issues, time, day, weeks, years, locations, document's file size, latency rate or bandwidth. Above issues might be causes of delays to access information through wireless connection at mobile devices. The delays will increase feelings of loss and grievances to negative impression for end-users (Sears & Jacko, 2000).

Customer satisfaction is one of the significant indications of customer behaviour. Well-satisfied mobile user is more likely to shop online and it is more possible that they will carry on shopping in the upcoming future again. The virtuous circle improves the effective factors in customer satisfaction and ends up with more satisfy and loyal user of the future. There are lots of studies conducted that explain how to scale user behaviour and how to measure E-customer satisfaction. Some of them classifies the customers based on their shopping behaviour's which indicate attributes affecting the customer satisfaction.

Customer satisfaction is an important role in marketing activities and is accepted as the primary outcome. Customer satisfaction is a concept used to describe a situation in which an exchange meets the needs and expectations of its customers. It covers the supply of products or services that meet the customer's demands for the quality and service of the price paid. Customer satisfaction, as a business concept, can also be used to measure how the delivery of goods or services exceeds customer expectations (Meyer & Schwager, 2007).

According to the classification of the satisfaction concept, satisfaction can be achieved by conceptual criteria and reference methods. The conceptual criterion describes satisfaction with processes and types of consumer responses, while the reference criteria represents aspects of the conditions under which these responses and processes take place (Carlsson & Walden, 2002).

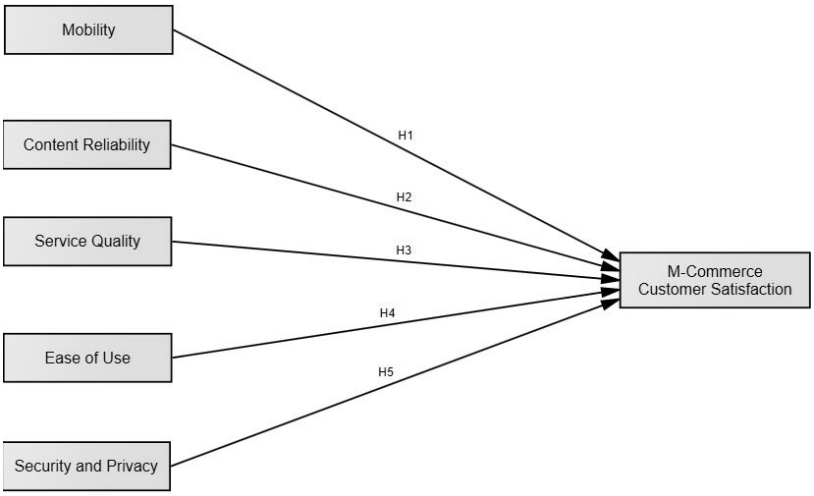
THEORETICAL MODEL AND HYPOTHESES

Mobility is one of the key advantages of mobile technologies and its benefits influence consumer's intention to use m-commerce (Liébana-Cabanillas, 2016). The content reliability of an essay is accordingly defined as being independent of the reader reliability. Formulas are derived for reader reliability and content reliability (Gulliksen, 1936). SQ is considered as a critical determinant of competitiveness. Attention to SQ can help an organization to differentiate itself from the other organizations and gain a lasting competitive advantage. High quality of service is considered as an essential determinant of the long-term profitability which is not only service organizations, but also manufacturing organizations. In some manufacturing industries, SQ is considered as more important order winner than "product quality". Superior "SQ" is a key to improved profitability, and not the cost of doing business. Exemplary service is the next sale in the making (Niazi, Siddiqui, Alishah, & Hunjra, 2012). Ease of use is a straightforward concept –it's a measurement of how easy the finished product is to use by its intended users. Design is often a battle between trying to deliver functionality and trying to deliver ease of use. Security and Privacy can be defined as a post-choice evaluative judgment concerning a specific purpose decision and is mostly used as part of the confirmation/disconfirmation paradigm (Bettray, Suessmair, & Dorn, 2017). Satisfaction has been analyzed in-depth in the marketing literature (Edvardsson, Johnson, Gustafsson, & Strandvik, 2000).

The adapted research framework given in Figure 2, which is constructed upon the previous literature and objectives of the study, is used to figure out the influential factors effectively and it provides us with an operational relationship among the different variables. The model includes five main variables namely mobility, content reliability, service and quality, ease of use, security and privacy in the engagement of virtual economic activity among E-commerce customers. Therefore, based on the literature, five

hypotheses are propounded in order to analyze the influence of each variable on customer satisfaction in one of the M-Commerce platforms.

Figure 2: Conceptual Framework



RESEARCH METHODOLOGY

To meet research objective, quantitative research methods were implemented for this study. Primary data was obtained via self-administered online questionnaire. Online surveying has following advantages: elimination of survey related cost, time efficiency, less social pressure on respondents as they feel anonymous (Belanger, Hiller, & Smith, 2005). T his research requires the collection of data from a wide range of Turkish customers who are currently participating in online shopping. The Structural Equation Model (SEM) is regarded as a proper method to reach the objectives of this study as it uses different types of models to describe relationships within observed variables and to perform quantitative tests for a research model. One of the benefits of SEM was that it can be employed universally for various research topics. Moreover, SEM is able to test and evaluate various and complex models (Schumacker & Lomax, 2010). SEM includes regression, path and confirmatory analysis. The variables in current research can be divided as latent and observed. Latent variables are those variables that cannot be measured directly. Since latent variables cannot be observed directly, they are being signified by observed variables which are being measured by means of surveys.

The online survey supported by Google forms was distributed among online shoppers in Turkey. The sample was selected according to the nonprobability method. This technique is based on the researcher's judgment and does not include probability techniques (Smith & Albaum, 2004). Barnes (2002) stated that multiple regression techniques require large sample size for generalization purposes and suggested to use following formula proposed by (Nilashi, Reza Mirabi, Ebrahimi, & Zare, 2015).

As the current research focuses on quantitative research techniques, Likert type inquiries were conducted for the survey data. In the first part of the survey, participants were asked specific type of the questions in order to obtain information that will reflect demographics features and customer profiles. The first part of the survey includes questions aimed to measure demographic features of the participants as gender, age, education level, internet usage, frequently used devices for online shopping, online shopping experience, and online purchased product category and name E-retailers. The second part of survey includes question aimed to measure the research variables like: Mobility, Content Reliability, Service Quality, Ease of Use and Security & Privacy. Likert point 5 scale was used for measurement of research items as follows: strongly disagree, disagree, neutral, Agree, Strongly Agree.

DATA ANALYSIS

Table 2 illustrates the demographic profiles of the responders of the survey with the respond of 204 participants most of whom from Istanbul.

Table 2: Respondents of Demographic Profile

Demographics Profile		**Frequencies**	**Percentage %**
Gender	Male Female	155 49	76 24
Age	20 - Under 20-29 30-39 40-49 50 - Over	4 113 78 7 2	2 55.4 38.2 3.4 1
Education	High School Collage Graduate University Graduate No Qualifications	8 57 139 0	3.9 27.9 68.1 0
E-Shopping Experience	1-3 Year 4-6 Year + 7 Year	112 85 7	54.9 41.7 3.4
Device Mostly used	Smart phone Personal Computer Tablet	164 36 4	80.4 17.6 2
Have you ever done online shopping	Yes No	199 5	97.5 2.5

* Note: The sample size (n) is 204.

**Note: Percentages may not add up to 100% due to missing data.

The 24% of the responders is female and the 76% of the responders is male. There are various groups of respondents; holding different age level. As easily seen from Table 2, the 55.4 % of the responders of the survey is between the age of 20-29 and the 38.2% of them is between the age of 30-39. Since the level of education is an important issue, in demographic part of the questionnaire we asked their education level and most of the participants (68.1%) have bachelor's degree. The second highest percentage of education level consists of the people who have collage graduate with 27.9%. The rest of the responders with 3.9% have high school degree.

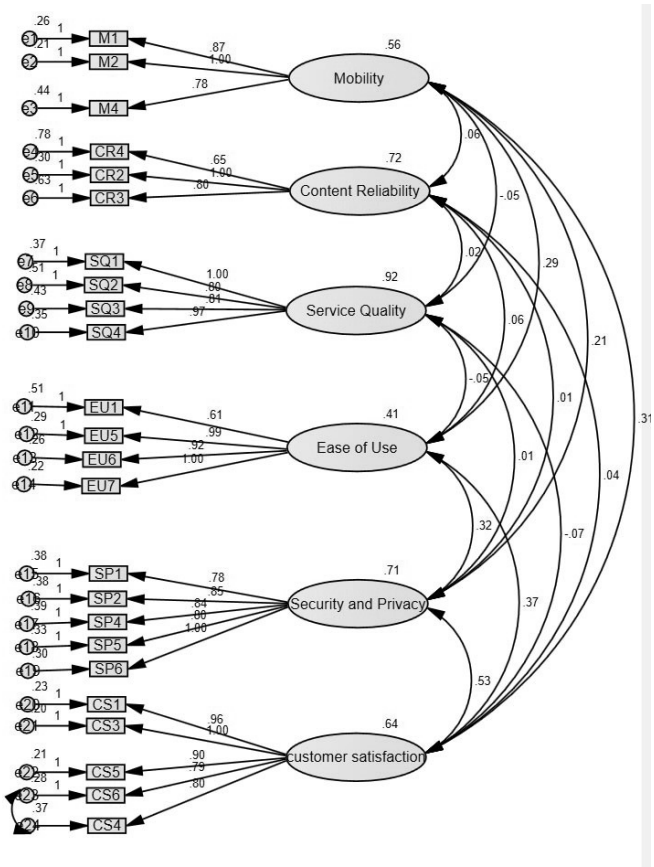
The question that measures the experience of online shopping has different frequencies. The most of the responders has experience from 1 to 3 year experience with 54.9.7%. The 41.7% of responders has experience from 4 to 6 years and the rest of them has experience greater than 7 years.

Also from Table 2, it can be easily seen that the 80.4% of the responders prefer to use their smart phones, 17.6% prefer to use personal computers and 2% prefer to use their tablets while they are making online shopping. In addition, upon the question whether they have an experience with online shopping, the 97.5% responded as they had an experience before and 2.5% responded as they have not any experience before. The most interesting finding from the demographic part of the survey is that 97.5 % participants make online shopping. The second section intended to search users' frequent activity context with mobile devices. Turkish purchasers' behavior towards with handheld devices has been discussed here. As one of the important factor that affects users when they are using the devices, at first, the survey contestants were asked to select best three regular activities performed in devices (Figure 3).

As an outcome, the largest figures communicating with friends and family of 90.7%, searching on the Internet 60.8%, placing orders 49%, shopping online 58.8%, for now, the part of people who use these devices to pay bills is 42.2%, comparing products online 39.2% and transfer money 42.2% respectively. Above top user-context, activities of user are also most popular regular activities on mobile in many countries.

Confirmatory factor analysis (CFA) is a multi-variate statistical formula. It is singular form of factor analysis. CFA is used to test whether, methods of a construct are consistent with nature of hypothesis under question. For this study, Confirmatory Factor Analysis (CFA) was conducted in SPSS AMOS (version 22).

Figure 3: CFA Model



The hypothesized CFA model is given in Figure 3. After the various re-statement and re-estimations based on the changes indices, this model was obtained main objective of CFA is to testing extent to which observed variables depend on the underlying secret structures.

Table 3: CFA - Unstandardized Regression Weights

Items	Variables	Estimate	S.E.	C.R.	P
M4	MM	0.778	0.085	9.151	***
M2	MM	1.000			
M1	MM	0.870	0.081	10.707	***
CR3	CR	0.804	0.141	5.714	***
CR2	CR	1.000			
CR4	CR	0.646	0.120	5.379	***
SQ2	SQ	0.800	0.071	11.316	***
SQ1	SQ	1.000			
EU1	EU	0.605	0.093	6.522	***
SP2	SP	0.845	0.071	11.981	***
SP1	SP	0.782	0.068	11.424	***
CS3	CS	1.000			
CS1	CS	0.960	0.061	15.739	***
EU5	EU	0.986	0.090	10.955	***
CS5	CS	0.898	0.057	15.649	***
CS6	CS	0.786	0.059	13.273	***
SP4	SP	00.843	0.071	11.898	***
SP5	SP	0.799	0.066	12.065	***
SQ3	SQ	0.814	0.068	11.958	***
SP6	SP	1.000			
EU6	EU	0.916	0.084	10.866	***
EU7	EU	1.000			
SQ4	SQ	0.966	0.072	13.427	***
CS4	CS	0.797	0.066	12.067	***

Standardized regression weights (coefficients) are given in Table 3. These coefficients are the estimated values of items and variables, which were standardized before.

The squared-multiple correlations which given in Table 4 shows percent of the alteration in given indicator all variables explained by its latent variable factor. In addition, it can use to assess the reliability of the indicator. The higher this indicator is, the more reliable the given indicator is. Table 4 shows that squared multiple correlations of all indicators are above 0.50.

Table 4: Model of Fit Metrics for CFA Model

Measure	Estimate	Interpretation
CMIN/DF	1.299	Excellent
CFI	0.971	Excellent
SRMR	0.05	Excellent
RMSEA	0.039	Excellent
PClose	0.946	Excellent

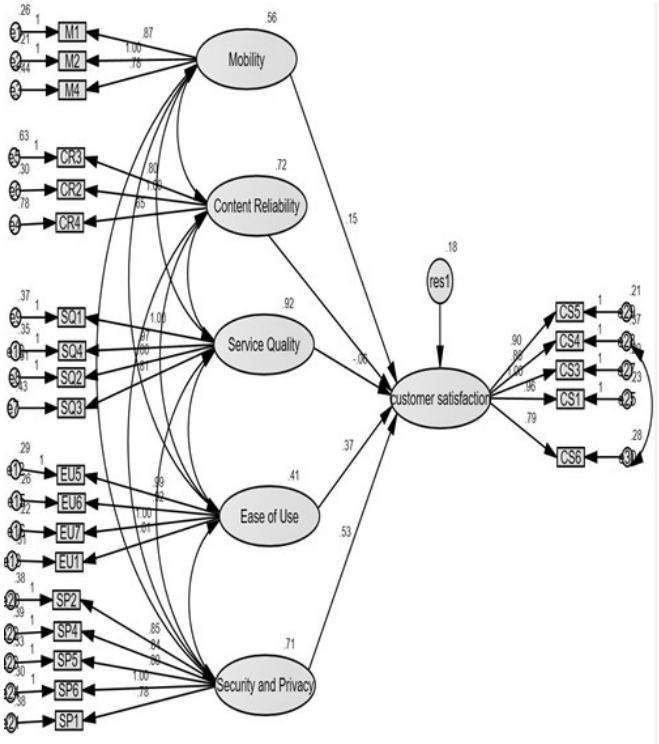
* CFI>0.95, SRMR<0.08, RMSEA<0.06.

HYPOTHESES TESTING STRUCTURAL EQUATION MODELING (SEM)

SEM concentrates on data analyzing and evaluating relationships between hypothesized latent in variables. Moreover, structural Equation Modeling provides huge extent of options connected to relationship among used variables comparing to CFA and imply two components: measurements model (basically CFA itself) and structural model.

While the measurement model (i.e., CFA) examines where relationship between latent variables and their measures, the structural model is the relationship between the latent variables of the proposed model. Structural model of the study is given in Figure 1.4. In this research, standardized regression weights (i.e., beta coefficients) were utilized to discuss the results. These standardized coefficients are given on the arrows in the below given figure. The standardized coefficients refer to how many standard deviations a dependent variable will change, per standard deviation increase in the predictor variable (Schreiber, Nora, Stage, A. Barlow, & King, 2006). In order to examine hypotheses, global and local tests will be conducted. For hypothesis to be supported, it is critical for local test to be passed. At the same time, it is essential to note that initially global test to be met for local test to make sense. Another global test to be conducted is R-squared. Respectively, in case of significant p-value and model fit, but low R-square hypotheses cannot be supported as relationships tested do not reflect adequate variance in endogenous variable (Gaskin & Lowry, 2014).

Figure 4: Structural Model



Model of fit metrics for structural model is given in Table 5. By considering the metrics of CMIN/DF, CFI and RMSEA, it cloud be concluded that proposed structural model as a well-fitting model.

Table 5: Model of Fit Metrics for Structural Model

Measure	**Estimate**	**Interpretation**
CMIN/DF	1.299	Excellent
CFI	0.971	Excellent
SRMR	0.05	Excellent
RMSEA	0.039	Excellent
PClose	0.946	Excellent

Table 6 which is given below shows the regression weights of the structural model. Mobility has a positive impact on M-commerce Customer Satisfaction ($\mathbf{H_1}$: β=0.224, S.E. =0.071 and p<0.05). However, Content Reliability has a no positive impact on M-commerce Customer Satisfaction ($\mathbf{H_2}$: β=0.009, S.E. =0.051 and p>0.05). At the same time, Service Quality has no positive impact on M-commerce Customer Satisfaction ($\mathbf{H_3}$: β=-0.055 S.E. =0.042 and p>0.05). And also, Ease of Use has a positive impact on M-commerce Customer Satisfaction ($\mathbf{H_4}$: β=0.373 S.E. =0.113 and p<0.001). Finally, Security & Privacy has a positive impact on M-commerce Customer Satisfaction ($\mathbf{H_5}$: ß= 0.527, S.E. = 0.072 and p<0.001).

Table 6: Structural Model Regression Weights

Dependent Variable		Independent Variables	Estimate	S.E	C.R	P
CS	<---	MM	0.244	0.071	2.712	.005
CS	<---	CR	0.009	0.051	0.183	0.855
CS	<---	SQ	-0.055	0.042	-1.321	0.187
CS	<---	EU	0.373	0.113	3.298	***
CS	<---	SP	0.527	0.072	7.357	***

Note: *** refers to P < 0.001

Table 7: Illustrates The Findings From The Hypothesis Tests

Hypotheses	Result
H_1: Mobility has a positive impact on M-commerce Customer Satisfaction.	Supported
H_2: Content Reliability has a positive impact on M-commerce Customer Satisfaction.	Not Supported
H_3: Service Quality has a positive impact on M-commerce Customer Satisfaction.	Not Supported
H_4: Ease of Use has a positive impact on M-commerce Customer Satisfaction.	Supported
H_5: Security and Privacy has a positive impact on M-commerce Customer Satisfaction.	Supported

LIMITATION OF THE STUDY/ FUTURE WORK

Primarily, this study work seek to depict the effects on M-commerce features on customer satisfaction. Even though obtained results seem encouraging as any study, it has its limitations. First of all, the data that was used for analysis has been obtained based on accessibility and subjective opinion of the researcher. Secondly, despite the fact that respondents prior filling in surveys were given detailed information about its purpose and objective, survey carried self-reported nature. Thirdly, only five M-commerce features (based on collected literature within the scope of the study) have been analyzed in current study. There might other critical M-commerce features that impact Turkish customers' satisfaction in a considerable way. Fourthly, as M-commerce has dynamic nature, obtained results might be after certain period and the model require specific updates and modifications in the future. Finally, the limited time was another constraint that researcher faced during research period. Taking into consideration above-mentioned limitations researchers may conduct new studies with improved models and hypotheses that will let to have better understanding to Customer Satisfaction in m-commerce in Turkey.

It will be interesting to direct future researches to have mixed outcomes that will include both customer and M-retailer perspectives. In this way, we will be able to see the picture as a whole and fill in existing gaps in a more efficient manner. Despite the fact that structural equation modeling requires minimum of 204 responses as a sample size, covering large samples will help to represent bigger portion of the population and generalize outcomes.

CONCLUSIONS

Current and earlier researches determined apparel sector as one of the most demanded in M-commerce of Turkey, however, it will be interesting to focus on another segments as well. In this way, the results within M-commerce concepts can be generalized and represent segments that are absent in the literature now.

From the customer satisfaction of M-commerce, factors affecting on M-commerce in customer satisfaction results from data-analysis. "Mobility, Ease of Use, Security and Privacy" were proven as the most main factors in "Customer Satisfaction" and other factors in accordance with the results of data in categorizing customers are "Content Reliability and Service Quality" were not found to be significant predictor.

Most of the respondents are categorized in the same group; also they perceived their overall satisfaction according to degree of satisfaction with operation process. Based on this result, we also find out that they are essential, bottom line factors to satisfy customers.

The main purpose of this study is to examine the relationship between dependent and independent variables of the model. In our model Mobility, Content Reliability, Service Quality, Ease of Use, and Security and Privacy are the independent variables and Customer Satisfaction is the dependent variable. To examine the relationship between these variables, we construct 5 main hypothesis and to test their relationship we collect data by the help of the questionnaire (survey). The survey has been conducted with 204 responders most of whom from Istanbul. According to demographic factors of customers 24% were female and 76% were male.

The responders who are in the age of 20 to 29; have under graduate degree and have mostly 1-3 year experience in M-commerce. They mostly use smart devices to use online chats and to pay their bills.

When searching on internet and doing shopping, they use internet most of the time and shop mostly with smart devices.

Later datas were analyzed via CFA and SEM analysis processed through SPSS (version 19) and SPSS AMOS (version 22) statistical software. Within the scope of CFA standardized regression weights were calculated. It intends to measure the extent to which observed variables represent latent variables. Overall, outcomes represent a considerable contribution. According to the summary of hypotheses testing, three of the proposed hypotheses were statistically and significantly supported and two hypotheses were unsupported.

Most of the companies are focusing on customer satisfaction for awareness. Current online shoppers should not be treated according to old standards. Nowadays, customers have a power of information, especially when it comes to E-commerce business. It is vital to understand needs and wants of the online shoppers as well as meeting of their expectations for generating security and privacy and customer satisfaction respectively. M-commerce

is a tool that meets requirements mentioned above in certain extent. By defining, among the most common features of M-commerce, five of them in the study have been focused on: mobility, content reliability, and service quality and ease of use and finally, security and privacy.

All of the mentioned features demonstrated either direct or indirect impact on M-commerce customer satisfaction. It is important findings for M-retailers that they believe they meet customers' expectations, needs and wants without paying attention to the features mentioned above in their M-commerce strategies. The M-retailers that allocated big portion of the budget and effort for marketing activities to create an image of caring company about M-commerce customer satisfaction should make sure that their background in terms of M-commerce framework is indeed performing in order to create satisfaction of customers.

At the same time, the results of this study should alert M-retailers that they do not have strong M-commerce framework and content reliability and rethink existing strategies and reconsider available information of M-commerce approach for further improvements. Another important finding is the fact that M-commerce features like mobility, ease of use and security and privacy have positive impact on perceived usefulness and on the other hand, content reliability and service quality for non-supported factors impact on M-commerce customer satisfaction though they were not supported. This demonstrates importance of customer satisfaction in M-commerce features that may enhance customer M-shopping experience one way or another. Thus, the M-retailers that are concerned with perceived usefulness of their smart device should consider M-commerce features as one of the critical measures.

REFERENCES

[1] Alfahl, H., Sanzogni, L., Houghton, L., Sandhu, K. (2012). Mobile Commerce Adoption in Organizations: A Literature Review and Preliminary Findings. *10*(2): 47-68. doi:10.4018/978-1-4666-4510-3.ch003

[2] Anh, C.P. (2015). Factors Influence Customer Satisfaction In Mobile Commerce. *International Busines*. Retrieved from https://core.ac.uk/download/pdf/38132894.pdf

[3] Barnes, S. (2002). The mobile commerce value chain: analysis and future developments. *International Journal of Information Management, 22*(2): 91-108. doi:10.1016/S0268-4012(01)00047-0

[4] Belanger, F., Hiller, J., Smith, W. (2005). Fundamentals of Marketing Research. AGE Publications, Inc.

[5] Bettray, J., Suessmair, A., Dorn, T. (2017). Perceived Price Fairness in Pay-What-You-Want: A Multi-Country Study. *American Journal of Industrial and Business Management, 07*(5): 711-734.

[6] Chan, F.T., Chong, A.Y.-L. (2013). Analysis of the determinants of consumers' m-commerce usage activities. *Online Information Review, 37*(3): 443-461.

[7] Carlsson, C., Walden, P. (2002). Mobile Commerce: A Summary of Quests for Value-Added Products & Services. *Constructing the eEconomy*, s. 463-476.

[8] Choi, J., Seol, H., Lee, S., Cho, H., Park, Y. (2008). Customer satisfaction factors of mobile commerce in Korea. *Internet Research, 18*(3): 313-335.

[9] DifferencesKey. (2008, July 26). *Distinctions between M-Commerce and E-commerce*. Retrieved from Key Differences: https://keydifferences.com/difference-between-e-commerce-and-m-commerce.html

[10] Edvardsson, B., Johnson, M., Gustafsson, A., Strandvik, T. (2000). The effects of satisfaction and loyalty on profits and growth: Products versus services. *Total Quality Management, 11*(7): 917-927.

[11] Forman, G. H., & Zahorjan, J. (1994). The challenges of mobile computing. *IEEE, 27*(4): 38-47. doi:10.1109/2.274999

[12] Gaskin, J.E., Lowry, P.B. (2014). Partial Least Squares (PLS) Structural Equation Modeling (SEM) for Building and Testing Behavioral Causal Theory: When to Choose It and How to Use It. *IEEE Transactions on Professional Communication, 57*(2): 123-146.

[13] Gulliksen, H. (1936). The Content Reliability of a Test. *Psychometrika, 1:* 189-194.

[14] Grönroos, C., Gummerus, J. (2014). The service revolution and its marketing implications: service logic vs service-dominant logic. *Managing Service Quality, 24*(3): 206-229.

[15] Hu, W.-C., Yeh, J.-h., Fu, L., Yang, H.-J. (2006). Handheld Computing and Programming for Mobile Commerce. *IJWIS, 2*(3-4): 164-175.

[16] Hyeon joo, S., Jeewon, C., Sungjoo, L., Hyunmyung, C., Yongtae, P. (2008). Customer satisfaction factors of mobile commerce in Korea. *Internet Research, 18*(3): 313-335.

[17] Keengwe, J. (2015). *Promoting active learning through the integration of mobile and ubiquitous technologies.* Hershey: IGI Global. doi:10.4018/978-1-4666-6343-5

[18] Lee, T. (2005). The impact of perceptions of interactivity on customer trust and transaction intentions in mobile commerce. *Journal of Electronic Commerce Research, 6*(3), 166-180. Retrieved from https://pdfs.semanticscholar.org/2b7e/5c7e7b4cbcbaf2d834fcac664d17f6449ca0.pdf

[19] Liébana-Cabanillas, F. (2016). A SEM-neural network approach for predicting antecedents of m-commerce acceptance. *International Journal of Information Management, 37*(2): 14-24.

[20] Meyer, C., Schwager, A. (2007). Understanding Customer Experience. *Harvard business review, 85*(2): 116-126.

[21] Niazi, G.S., Siddiqui, J., Alishah, B., Hunjra, A.I. (2012). Effective advertising and its influence on consumer buying behavior. *European Journal of Business and Managemen, 3*(3): 114-119.

[22] Nilashi, M. a., Reza Mirabi, V., Ebrahimi, L., Zare, M. (2015). The role of Security, Design and Content factors on customer trust in mobile commerce. *Journal of Retailing and Consumer Services, 26:* 57-69.

[23] Schreiber, J., Nora, A., Stage, F., A. Barlow, E., King, J. (2006). Reporting Structural Equation Modeling and Confirmatory Factor Analysis Results: a review. *Journal of Educational Research, 99*(6): 323-338.

[24] Schumacker, R.E., Lomax, R.G. (2010). *A Beginner's Guide to Structural Equation Modeling* (3 ed.). Routledge.

[25] Sears, A., Jacko, J.A. (2000). Understanding the Relation Between Network Quality of Service and the Usability of Distributed Multimedia Documents. *Human-Computer Interaction, 15*(1): 43-68.

[26] Siau, K., Shen, Z. (2003). Building customer trust in mobile commerce.

[27] Smith, S.M., Albaum, G.S. (2004). Measurement and scaling in marketing research. Fundamentals of marketing research, 371-410.

[28] Tiwari, R., Buse, S., Herstatt, C. (2006). Mobile Banking as Business Strategy: Impact of Mobile Technologies on Customer Behaviour and its Implications for Banks. *PICMET, 4*, 1935-1946. doi:10.1109/PICMET.2006.296770

[29] Zhang, J., Yuan, Y. (2003). M-commerce Verus Internet-Based E-commerce: The Key Differences. *International Journal of Mobile Communications, 1:* 1-2. doi:10.1504/IJMC.2003.002457

[30] Zhao, L., Lu, Y., Zhang, L., Chau, P. (2012). Assessing the effects of service quality and justice on customer satisfaction and the continuance intention of mobile value-added services: An empirical test of a multidimensional model. *Decision Support Systems, 52*(3): 645-656.