T.C.

ISTANBUL AYDIN UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

MANAGING ONLINE CUSTOMER SATISFACTION AND LOYALTY THROUGH ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT IN DIGITAL B2C MARKETS; A STUDY OF TURKISH FASHION COMPANIES

MASTER'S THESIS

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Department of Business
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Thesis Advisor: Assist. Prof. Dr. Burçin KAPLAN

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DECLARATION

I hereby declare with respect that the study “Managıng Onlıne Customer Satısfactıon And Loyalty Through Electronıc Customer Relatıonshıp Management In Dıgıtal B2c Markets; A Study Of Turkısh Fashıon Companıes”, which I submitted as a Master thesis, is written without any assistance in violation of scientific ethics and traditions in all the processes from the Project phase to the conclusion of the thesis and that the works I have benefited are from those shown in the Bibliography. (.../.../20...)

ASHINYI ATEGHANG NICOLINE

I dedicate this work to my Big Brother Nji Ateghang Felix,
for taking up the responsibility of the father we both lost at a
very young age and making sure I stayed in school.

And to my lovely daughter Ava Melissa
for enduring my absence while I study to complete this program.

FOREWORD

Dreams are valid if you believe in yourself, and I am proud I believed in myself even when it seemed impossible. For every sacrifice I had to make to be able to study for my MBA, I will forever be glad I took the bold step and for making my family proud.

Leaving home and moving to a foreign country to study was the toughest decision I ever had to make, and I'm glad I have been able to achieve my purpose with unrelenting support from my family. I am eternally grateful for your support and encouragement throughout this journey, I couldn't have made it without you.

To my supervisor Dr Burçin Kaplan; you have been most patient with me and I'm grateful. Thank you for supporting me, encouraging me and tolerating my excesses; I'm lucky to have had someone as understanding as you to supervise my thesis and I look forward to doing more research with you.

To all my friends and classmates at Istanbul Aydin University who offered assistance to me in one way or the other; I say a big THANK YOU!

August 2020 **Nicoline Ashinyi Ateghang**

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ABBREVIATIONS

AMOS : Analysis of Moment Structure
AT : At-purchase eCRM
AVE : Average Variance Extracted
B2B : Business to Business
B2C : Business to Customer
B2G : Business to Government
C2C : Customer to Customer
CFA : Confirmatory Factor Analysis
CFI : Comparative Fit Index
CL : Customer Loyalty
CLV : Customer Lifetime Value
CMIN : Chi-Square Value
CPV : Customer Perceived Value
CR : Composite Reliability
CRM : Customer Relationship Management
CS : Customer Satisfaction
DF : Degrees of Freedom
DV : Dependent Variable
ECRM : Electronic Customer Relationship Management
EFA : Exploratory Factor Analysis
ERP : Enterprise Resource Planning
G2G : Government to Government
GFI : Goodness-of-Fit Index
HTTP : Hyper Text Transfer Protocol
IV : Independent Variable
KMO : Kaiser-Meyer-Olkin
MSV : Maximum Shared Variance
MV : Mediating Variable
NFI : Normed Fit Index
PCLOSE : P value of Close-Fit
PDA : Personal Digital Assistant
PNFI : Parsimony Normed Fit Index
POST : Post-purchase eCRM
PRE : Pre-purchase eCRM
RMSEA : Root Mean Square Error of Approximation
SE : Standard Error
SEM : Structural Equation Modelling
SPSS : Statistical Package for Social Science
SR : Standard Residuals
SRMR : Standardized Root Mean Square Residual
St. Dev. : Standard Deviation
TL : Turkish Lira

TLI : Tucker-Lewis Index
TUBISAD : Turkey Informatics Industry Association
VIF : Variance Inflation Factor

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MANAGING ONLINE CUSTOMER SATISFACTION AND LOYALTY THROUGH ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT IN DIGITAL B2C MARKETS; CASE OF TURKISH FASHION COMPANIES

ABSTRACT

Companies of the Turkish fashion industry fall in the category of businesses that are currently trending in the digital market and facing challenges of customer satisfaction. These challenges are partly because these companies focus on attracting customers and put very little effort in retaining the customers after their first purchase. Considering that the immediate objective of eCRM being customer satisfaction has witnessed alarming failures in the past years, every marketer these days is focused on better understanding the relationship between these two concepts in the digital business-to-customer market of the Turkish Fashion Industry. With the high level competition in the digital market, customer satisfaction and loyalty are the main objectives that companies seek to achieve.

E-commerce in Turkey has witnessed rapid growth in recent years and fashion accounts for 41.9% of Turkey's e-commerce revenue. This study scrutinized the relationship between eCRM and online customer satisfaction and loyalty in this sector, and provide insights into how eCRM implementation can influence customer satisfaction and loyalty. Quantitative research methods were applied; primary data was collected through self-administered questionnaires and analysed with the help of IBM SPSS 20 and SPSS AMOS 20. The constructs of the research model were evaluated through Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) analysis.

The findings of this research indicated that the operationalized eCRM features have some significant direct and indirect relationships with online customer satisfaction and customer loyalty, and attested to the mediating effect of customer satisfaction on the relationship between eCRM implementation and customer loyalty.

Keywords: *E-CRM, CRM, e-commerce, online customer satisfaction, online customer loyalty, EFA, CFA, SEM, quantitative research.*

SANAL B2C (IŞLETMEDEN-TÜKETİCİYE) PAZARLARDA, ELEKTRONİK MÜŞTERİ İLİŞKİLERİ YÖNETİMİ (ECRM) VASITASIYLA SANAL MÜŞTERİNİN MEMNUNİYETİ VE SADAKATİNİN SAĞLANMASI; TÜRK MODA ŞİRKETLERİ DURUMU

OZET

Türk moda sektörünün şirketleri, şimdilerde sanal pazarda trend olan ancak müşteri memnuniyeti konusunda zorluklarla karşilaşan işletmeler kategorisine giriyor. Bu zorluklar kismen, şirketlein muşteri çekmeye odaklanması, ancak muşterinin ilk satin alimindan sonra, onu elde tutmak icin çok az caba sarfetmelerinden kaynaklanmaktadır. Elektronik Müşteri ilişkileri Yonetimi (eCRM) 'nin oncelikli hedefinin müşteri memnuniyeti olmasının, geçmiş yıllarda endişe, verici başarısızlıklara taniklik etmesinden dolayi olduğunu göz önünde tutarak, artik her işletmeci, Türk moda sektörünün işletmeden-tuketiciye tarzi sanal pazarinda var olan bu iki kavramin arasindaki ilişkiyi daha iyi anlamaya odaklaniyor. Müşteri memnuniyeti ve sadakati, sanal pazardaki ust duzey rekabet ile birlikte, sirketlerin ulaşmak istedigi temel hedef haline geldi.

Türkiye'de e-ticaret, son yıllarda hizli bir büyumeye tanik oldu ve şu an moda, Türkiye'nin e-ticaret gelirinin %41.9 unu oluşturuyor. Bu çalışma, sektordeki eCRM ile sanal müsterinin memnuniyeti ve sadakati arasindaki ilişkiyi incelemeiş ve eCRM uygulamasınının bunlari nasil etkileyebileceğine dair fikir vermiştir. Çalişmada, nicel araştirma yönetmeleri uygularmış; temel veriler, bireysel doldurulmuş anketler aracaliğiyla elde edilmiş, IBM SPSS 20 ve SPSS AMOS 20 yazılimlarının yardimiyla analiz edilmiştir. Araştirma modelinin yapilari, Açıklayıcı Faktör Analizi (EFA), Doğrulayıci Faktor Analizi (CFA) ve Yapisal Eşitlik Modellemesi (SEM)'nin analizi vasıtalarıyla degerlendirilmiştir.

Bu araştırmanın bulgulari, operasyonelleştirilmiş eCRM ozelliklerinin sanal müşterinin memnuniyeti ve sadakatiyle doğrudan ve dolaylı bazi onemli ilişkilere sahip olduğunu gostermiş ve de muşteri memnuniyetinin, eCRM uygulamas ile müşteri sadakati arasindaki ilişkileri üzerindeki olumlu etkisini kanitlamiştir.

Anahtar Kelimeler*: E-CRM, CRM, e-commerce sanal müşteri memnuniyeti, sanal müsteri sadakati, EFA CFA, SEM, Nicel Araptırma*

1. INTRODUCTION

1.1 Review Background Knowledge

The concepts of customer satisfaction and customer loyalty are considered as important contributors to the success of any business and companies in this era have realized that they need to invest more in attaining these concepts if they want to succeed in the competitive market. The evolution of customer relationship management in the last ten years has gradually gone beyond a company's way of interacting with its existing customers by engaging more in activities that are likely to attract its potential customers. It is a known fact that every purchase effectuated depends on how the attraction phase of the customer lifecycle is handled, for without attraction, there will be neither purchase nor satisfaction and loyalty. Most companies have realized this and are putting more effort into managing customer attraction and retention. Over the last decades, companies have increasingly gained awareness of the benefits of maintaining customer relationships and how to manage these relationships. According to Sheng (2002), acquiring and retaining customers is considered the main objective of eCRM, and generates bottom-line financial benefits. It is quite obvious that the efforts vary from one business to the other and each business has a different level of priority accorded to their customer relations. But for B2C businesses, customer relation management (CRM) is considered a very vital factor of their survival and engaging in these customer focused activities is of utmost importance. According to Bradshaw & Brash (2001), customer relationship management reflects "identifying, attracting and increase retention of profitable customer by managing interactions with them."

Due to the rapid growth witnessed by the digital market in recent years, companies participating in this market have sought ways to adapt CRM to the e-commerce market, giving birth to the application of electronic customer relationship management (eCRM). According to Fjermestad & Romano Jr. (2003), eCRM is a combination of hardware, software, processes, applications

and management commitments focused on attracting and retaining customers with high purchasing potential while ridding themselves of those that are unprofitable. ECRM reduces the physical contact between companies and their customers but since there is a round-the-clock service platform, contact can be established any day at any time as the service is available on a 24/7 bases thus enhancing satisfaction and loyalty. Zornes & Gotta (2001) affirms that the emergence of eCRM enables many innovations in relationship management, supply chain management and inter-organizational collaborations.

This main aim of this research is to analyse the significance of the relationship that exists between eCRM and online customer satisfaction and loyalty in a digital business-to-customer market, focusing on the Turkish fashion companies. This sector of the Turkish market has been on the rise in recent years and companies in the sector have sought new and easier ways to get their goods to their customers by engaging in digital commerce (e-commerce). Customers no longer have to go through long and time consuming distribution channels to purchase manufactured products as the internet market has made it possible to acquire these products from the comfort of their homes.

1.2 Desired Outcome of the study

This study is scrutinizes the connection that exists between eCRM and online customer satisfaction and loyalty in e-commerce market, and to provide additional insights regarding the implementation of eCRM in the trending Turkish fashion sector. Although there have been previous Works about this relationship on a more general level, more substantial research will show how this relationship actually Works in the Turkish fashion sector. The study will provide a clearer picture of how each eCRM component affects the customers buying decisions with respect to satisfaction and loyalty.

This thesis will investigate whether the different e-CRM components differ in their significant contributions to online customer satisfaction, its contribution to customer loyalty, the mediating effect of customer satisfaction on the relationship between eCRM and customer loyalty, which of the components has the most significant contribution to customer satisfaction and which of them has

the most significant effect on customer loyalty. To get a clear understanding of these relationships, the following questions will be answered:

- Which internet marketing strategies do Turkish fashion companies use?
- Which e-CRM features do they focus on?
- Do these features adequately match the marketing strategies they use?
- What influence do these strategies have on customer satisfaction?
- How do these strategies influence customer loyalty?
- What influence does customer satisfaction have on the relationship between eCRM and customer loyalty?
- What are the benefits of buying and selling Turkish fashion brands online?
- What can be done to improve the interactions between buyers and sellers of Turkish fashion brands in the online market?

1.3 Expected Contribution

This study will not only contribute to existing academic knowledge on the concept of eCRM, but will also provide substantial information on the relationship that exists between eCRM implementation and online customer satisfaction and loyalty on one hand, and how these relationships work in the Turkish fashion market. There have been multiple studies on the influence eCRM has on customer satisfaction but none so far has looked at these relationships in the fast growing fashion sector of Turkey. As the market grows bigger by the day, competition intensifies; the big brands who have made a name for themselves over the years dominate the market as smaller brands struggle to find their place. The market has a lot of potential and new brands are popping up to take advantage, but in order for them to successfully grow in this era, they must develop new strategies that appeal to customers. For this to happen, they must first of all understand how the market functions, what makes it so appealing and how to turn the competitive nature of the market in their favor.

Recent studies suggest that each component of eCRM leads to different outcomes, and this study focuses on the eCRM components that are applicable to the online fashion market. This research will provide insights on this matter and provide information that will be useful for new and small brands trying to find their way to the customers. It will also help other researchers to discover the interesting side of eCRM in the fashion sector and to decide whether it is interesting enough for further investigation. The growing reputation of Turkish brands makes this research worthwhile, and this is interesting because it will increase the practical relevance of the findings.

1.4 Delimitations

For this study, some delimitations have been made to concretize and facilitate the investigation. It should first of all be noted that several researchers have divided the construct of eCRM in different ways. This research will focus on the components of pre-purchase eCRM, at-purchase eCRM and post-purchase eCRM, and only components that are applicable to the online fashion market will be considered.

This study on online customer satisfaction and loyalty towards Turkish fashion brands is limited to customers in Turkey. Since it will not be easy to collect data from the whole of Turkey, Istanbul will be the geographical sample to represent Turkey and the questionnaire will be randomly distributed as a matter of convenience to individuals that fall in the 18 to 60 years age gap, and only respondents with online shopping experience will be considered.

1.5 Definitions

Electronic commerce: E-commerce refers to business conducted through internet platforms relating to activities of information search, information sharing, purchasing or exchanging products and services; also maintaining customer relationships without face to face meeting unlike transactions done in traditional way.

Customer relationship management: This refers to a company's strategies that focus on managing their relationships and interactions with their customers in order to keep them satisfied with the company's products and services.

Electronic customer relationship management (eCRM): Application of CRM in the online market by using the internet to foster interactions between buyers and sellers. Forrester (2001) defines eCRM as a web centric approach to synchronizing customer relationships across communication channels, business functions and audiences.

Pre-purchase eCRM: These features provide prospective customers with the incentive to make purchase decision. Ataur & Iftikar (2008) define pre-purchase eCRM as the steps involved in searching for information on how to purchase or order the product online. This phase is vital in the purchasing process because it is based on what the prospective customer finds that he will decide whether to buy or not buy.

At-purchase eCRM: These features aim at assuring the buyer that completing the purchase will be a good decision and help them complete the process. Privacy and security are the most essential components at this stage as most buyers often worry about the safety of their personal information used during the purchase.

Post-purchase eCRM: It refers to the seller's effort to deliver the products that customers have purchased in the most efficient way to ensure repeat purchase. After-sale support and customer services are very important features of this construct as it will enable the seller to evaluate the customer's level of satisfaction after products are delivered.

Customer satisfaction: Refers to a measure of the customer's level of product's expected performance compared to the outcome of delivered product, Kotler (2000). It is safe to say that it is an after-sale evaluation of whether the decision to buy a certain product has attained expected performance.

Customer loyalty: In simple words, customer loyalty can be seen as part of a cause-effect chain of processes from first contact with perspective clients to the final purchase and delivery that hence aroused satisfaction and gives the clients incentive to repeat purchases.

Customer lifecycle: Can be defined as the different stages a customer undergoes from the time he recognizes his need for a product/service, to the actual purchase of that needed product/service, as well as the post purchase reactions that result from whether the purchase was satisfactory or not.

Customer lifetime value (CLV): This is a prediction of the future net profit attributed to having a mutually beneficial and satisfying relationship with a customer. In other words, customer lifetime value is a projection to estimate a customer's monetary worth to a business after factoring the value of the relationship with the customer over time (Rouse, 2015).

Conversion rates: This refers to the number of visitors to the website who make purchase. Let's say an e-commerce platform has 400 visitors in a month and 120 visitors bought something, the conversion rate will be 30%.

Marketing strategies: This refers to the different approaches companies implement in their quest to achieve sustainable and continuous growth and gaining a competitive advantage over their competitors. Each company's marketing strategies will vary depending on their business model and whether they are a product-selling or service-selling company.

Clothing industry: The clothing industry in the context of this research represents all brands that participate in the distribution of clothes and shoes in Turkey.

1.6 Outline of Thesis

This thesis is going to be structured as follows:

- *Chapter 1* has shown the introductory part of the thesis. It summarizes the background information by giving a review of eCRM and defining customer satisfaction with respect to e-commerce in the Turkish fashion sector, the purpose of this study, expected contribution, and definition of important terminologies related to proposed thesis topic.
- *Chapter 2* will outline theories and research on literature considered relevant to the study, explanations of eCRM components and concepts

related to customer satisfaction and loyalty. The chapter also outlines the importance of customer satisfaction and how to evaluate eCRM success.

- *Chapter 3* will define the variables that have been used for the study, formulate the hypothesis and bring out the conceptual model of the study.
- *Chapter 4* will give a description of the methods that are employed for the purpose of the study as well as descriptions of research design, sampling, data collection methods and survey instruments.
- *Chapter 5* will analyze the data and show findings of the study as well as results obtained from statistical data analysis. The necessary statistical methods and tools used will also be presented.
- *Chapter 6* will show review of the research findings and conclusions relative to the purpose of the study, managerial implications of the study and recommendations for future studies. It basically summarizes the research findings, thus providing suggested responses to research questions posed.

2. LITERATURE REVIEW

2.1 Defining E-Commerce and E-CRM

E-commerce and eCRM stand at the foundation of this study, thus requiring an in-depth understanding of both concepts to be able to understand online customer satisfaction and loyalty better (Khalifa & Shen, 2005). This chapter therefore sheds light on the evolution of eCRM from CRM, the evolution of e-commerce in Turkey, the functioning of e-commerce in the Turkish fashion sector, a review of eCRM features based on the triumvirate previously proposed by several authors, the importance of customer satisfaction to both the organization and its customers. The last section describes how to evaluate eCRM based on implemented strategies.

2.1.1 Evolution of E-CRM

The theory of eCRM cannot be well explained without an understanding of CRM in itself. Ehrens & Kiwak (2018) defines CRM as "practices, strategies and technologies that companies use to manage and analyse customer interactions and data throughout the customer lifecycle, with the goal of improving customer service relationships and assisting in customer retention and driving sales growth". In lay man's terms, companies use CRM to identify, attract and retain customers. ECRM on the other hand is merging technologies and related business activities towards the customer to facilitate the application of CRM (Abdulfattah, 2012).

Back from the days when "The Customer Is King" was a mantra used by almost all companies, customers were not even well treated by most of these companies. There was nothing royal about the way companies handled their customers especially after they had made their purchases. Most companies viewed the concept of customer support as doing a favour to customers and seemed to have completely forgotten or ignored the fact that their existence depended largely on the customers. Up until the early 1990s, customers were

contented with waiting in long queues to buy something as it was common and expected. İt didn't bother them that every time they needed to buy something, they had to go out to the store and get it. This made many organizations to forget the notion of royal treatment as customers didn't have any other choice than to find the products they needed themselves.

When the internet was finally opened to commercial use in 1991, e-commerce became possible. Organizations were gradually joining this new market by creating company websites where they exhibited and advertised their products and services. It took years for this market to fully develop as security protocols like the HTTP (hypertext transfer protocol) which allowed rapid access took almost four years to be developed. By 2000, many companies in the United States and Europe had set up their businesses on the internet platform. Ecommerce has evolved greatly over the years and has become seemingly limitless as it has removed all physical barriers between buyers and sellers all over the world. Buyers can now purchase products from different continents and have them delivered to their homes. Almost anything can be bought from the comfort of one's home and at any hour of the day. It is essential to point that there are nine (9) categories of e-commerce, each one involving one or two of the three parties; businesses, consumers and the government.

Table 2.1: Different business models in e-commerce

	Business	Consumer	Government
Business	B2B	B2C	B2G
Consumer	C2B	C2C	C2G
Government	G2B	G2C	G2G

Source: Irantaj, 2018

From the table above, the most common categories are the B2B and the B2C business models. In the context of this study, the B2C model will be used to determine how relationships between Turkish fashion distributors and their customers are managed.

The evolution in marketing channels also has influenced an evolution in marketing strategies; CRM is one of the strategies that have evolved to eCRM. This shift from CRM to eCRM has been engineered by the advent of new

technologies and with internet penetration rates steadily growing, eCRM has gained more popularity as a communication tool and relationship-building platform (Lam et al., 2013). CRM and eCRM are both marketing strategies geared towards achieving the most beneficial relationship between companies and their customers but each vary in the way these strategies are applied.

2.1.2 The e-commerce evolution in Turkey

E-commerce has recorded a rapid growth in Turkey over the last few years, making it a major contributor to the national income of the economy. The Turkish e-commerce association predicted that e-commerce sales will increase by 30-35% in 2020 based on the growing penetration rate added to the fact that online shopping was slowly infiltrating consumer life. The launching of Amazon Turkey also plays a great role in the projected growth as it provides millions of products from 15 different categories including household items, consumer electronics, books, cloths, shoes, fashion accessories all at competitive prices, reliable delivery and excellent customer service.

A TüBiSAD (Turkey Informatic Industry Association) 2018 report shows how the e-commerce market has evolved in Turkey over the period of 5 years (2013-2017). According to this report, e-commerce sales amounted to 42.2 billion Turkish Liras in 2017 from 38.8 billion Turkish Liras in 2016; making 37% growth for that year alone. The figures below are extracted from the TüBiSAD 2018 report.

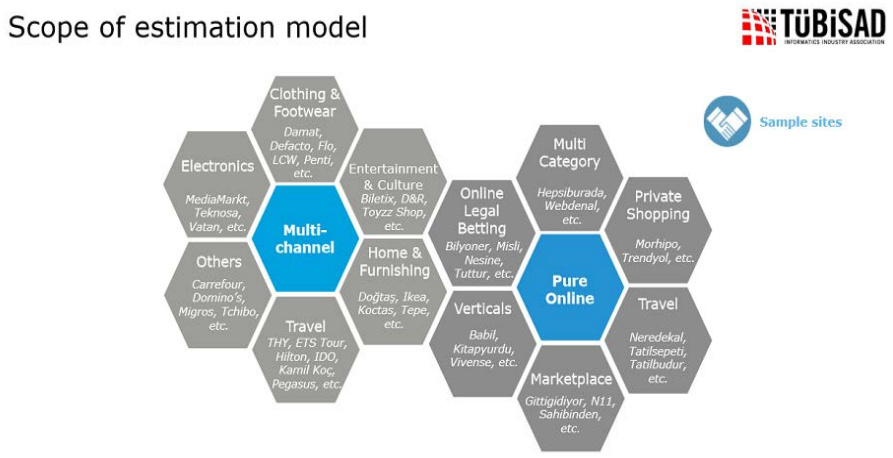


Figure 2.1: Scope of estimation model

Source: TüBiSAD 2018

- Figure 2.1 is the scope of the estimation showing which sectors are actively participating in online shopping in Turkey.
- Figure 2.2 shows the e-commerce market size and income from 2013 to 2017 as well as average annual growth rate.
- Figure 2.3 compares the categorical contributions of market participants of 2016 and 2017.

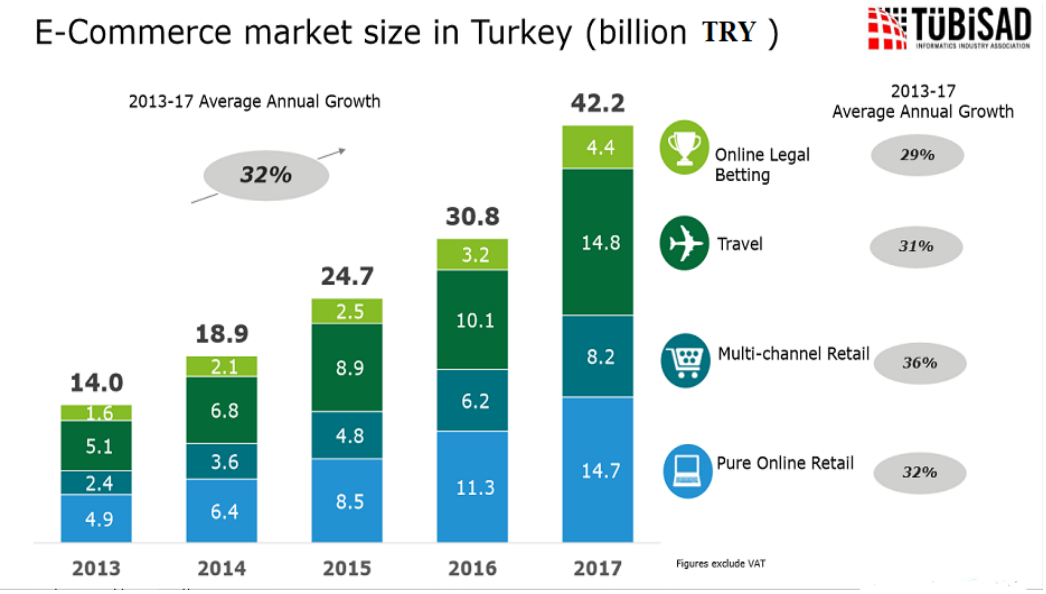


Figure 2.2: E-commerce market size, growth rate and income from 2013 to 2017

Source: TüBiSAD 2018

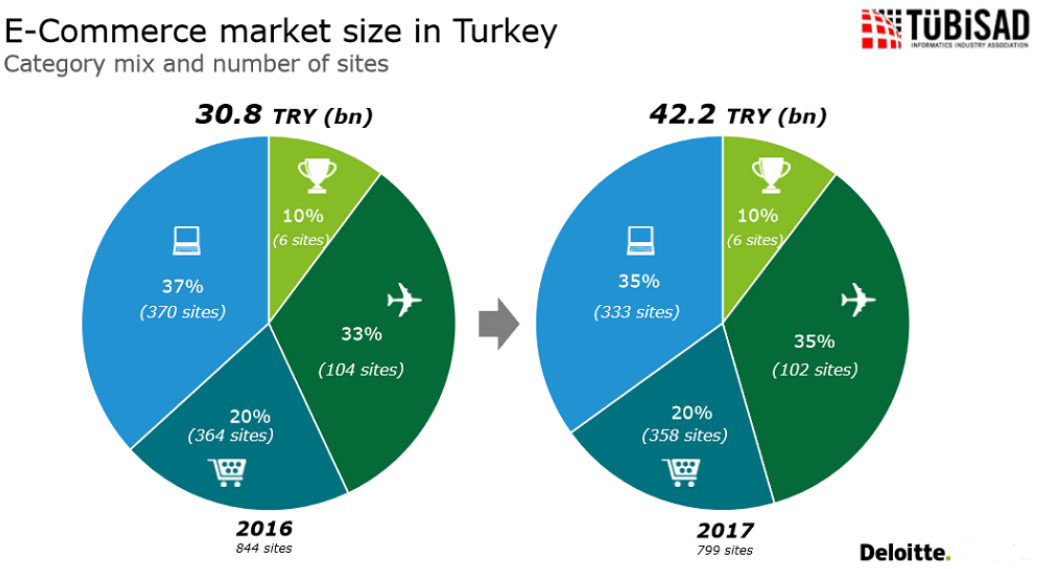


Figure 2.3: Category mix and contribution; traveling, online legal betting, multichannel retailing and purely online retailing.

The TüBiSAD report shows that retail contributed 55% of the total income while travel had 35% and online legal betting had 10%. Looking at the figures of online retail, it is important to mention that online stores like Morhipo, Trendyol and Hepsiburada are the leaders of the market as they provide a wide variety of products at very affordable prices. More than half of the people that ordered something online have bought from one of these stores.

Another force that has supported the growth of online shopping in Turkey is the variety of payment methods. In most countries, buying goods online requires prepayment when you place your order before the goods can be shipped to you. This is also the case with Turkey except most of the sites give the customer possibility of paying for goods either in cash or with credit card when they receive the goods.

2.1.3 E-commerce in the Turkish fashion sector

The Turkish fashion sector has moved from local traditional wears to internationally recognised fashion designs. In recent years, Turkey has made a name for itself in the world of fashion and distributors have sought more accessible outlets through which they can get their products to the customers more conveniently. As the number of e-commerce platforms is steadily growing daily, the list of distributors is increasing as well Amanzhanova (2018).

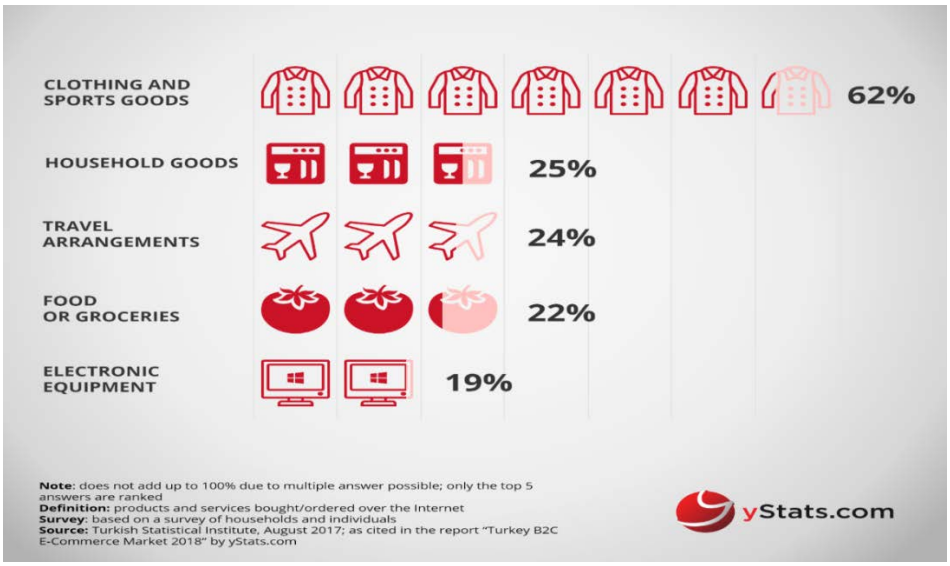


Figure 2.4: Top five product categories purchased online in Turkey

Source: *www.ystats.com*, 16/08/2018. Access date: 02/05/2019

A Ystat (2018) report ranked clothing as number one on the Turkey B2C e-commerce market based on data from 2017 proving that the Turkish population is highly invested in growing the e-commerce sector of Turkish clothing. Figure 2.4 below shows the Ystat (2018) report's top five (5) products and services bought online in the course of 2017.

Based on the focus of this thesis being the Turkish clothing sector which is ranked number one in the above mentioned report, a more detailed evaluation of the clothing sector is needed to be able to understand what factors have influenced this tremendous growth in recent years.

2.1.3.1 The Turkish clothing sector

According to a report by the Turkish Ministry of Trade released in September 2018, the Turkish clothing industry owns a 3.39% market share in the world market making it to the 8th position of world's textile and clothing suppliers and the 3rd largest supplier in the EU of clothing and textile. The evolution of this industry dates back from the 1980's when its products were considered low value added commodities, to present day 2018 where their production and export has become high value added manufactured commodities. Textile and clothing accounted for 18.4% of total exports recorded in 2017. Its capability to meet high standards has given them the chance to face competition in the international markets with high quality products as well as a wide range of product offerings. Turkey is known for having a broad collection of clothing brands and unique designs, also considered the second largest supplier of apparels in Europe and the 7th on list of top 70 cotton growing countries in the world with more than 370,000 tons production capacity annually (Ystat, 2018).

The rapid growth of this sector has led suppliers to seek easier ways of getting their products to the individual customer without necessarily going through suppliers and intermediaries, bringing them into the era of digital marketing and e-commerce.

In another report by Statista (2020), the Turkish fashion sector has generated revenue of US$3.3 billion in 2019 which accounts for 41.9% of total e-commerce revenue. Within this accounting period, e-commerce alone recorded

33.2 million users with a market penetration rate of 39.8%. Average annual revenue per user in the e-commerce segment amounts to US$237.80 in 2019.

The e-commerce model gives the individual customers direct access to manufacturers thereby eliminating very long distribution channels that increase the final cost customers have to pay for these products.

2.1.3.2 Target market analysis

In the Statista (2020) report, active paying customers of Turkish fashion brands are classified in three categories: users by age, users by income and users by gender. These figures are based on Statista's Global Consumers Survey.

Table 2.2: Classification of customers of the Turkish fashion sector

Users by Age		Users by Income		Users by Gender	
18 - 24 y/o	21.9%	Low Income	34.6%	Male	54.9%
25 - 34 y/o	30.9%	Medium Income	30.6%	Female	45.1%
35 - 44 y/o	25.8%	High Income	34.9%		
45 - 54 y/o	14.6%				
55 - 64 y/o	6.8%				

Source: *www.statista.com*, May 2020. Access date: 23/07/2020

Table 2.3 shows figures related to the online market for Turkish clothing and accessories, and the data represents buyers based in Turkey. The report shows that most of the buyers belong to the age range of 25-34 years old and this population is made up of low income users as most of them are either university students of freshly graduated from university. About 56% of the market falls between 25-44 years old made up of Millennials or Generation Y.

2.1.3.3 Online fashion stores in Turkey

There are hundreds of online fashion stores in Turkey, most of them internationally recognized, producing personalized designs and having a very broad market. Topping the list are stores like LC Waikiki, De Facto, Ipekyol, Trendyol, Morhipo, BTM Moda, and many more. Some of these stores sell only products with their brand name while some sell products from a wide variety of brands and producers. In order to understand how some of these stores have survived over decades, a research was made on a few of these brands.

- LC Waikiki: This is a top selling clothing brand founded by French designer Georges Amouyal and a partner in 1988 in France, with the “LC” being an abbreviation for “Les Copains” meaning “Friends” in French, and Waikiki referring to the famous Hawaiian Waikiki beach. It became a Turkish brand in 1997 when the partners decided to sell it to Turkish owners Mustafa Kucuk who is a producer and retailer of ready-to-wear fashion and home items, and his partners. As of December 2018, LC Waikiki operates 895 stores in 49 countries and has more than 35,000 employees, with 407 stores in Turkey alone.
- DeFacto: Ihsan Ateş founded DeFacto clothing brand in 2003 and is known for his affordable designs for young and on-trend customers. DeFacto was the first fashion brand that initiated omni channel in Turkey by engaging sales on global platforms like Aliexpress and Ebay. It is considered the fastest-growing company among the top 10 brands in the Turkish fashion industry. As of December 2018, Defacto operates 333 stores in 13 countries, with 283 stores in Turkey alone.
- Ipekyol: Operating under a parent organization called Miroglio Group, Ipekyol was founded in 1986 by Yalcin Ayaydin making fashionable clothing for the modern urban woman and it wasn’t until 1989 that it opened its first store in Rumeli Caddesi, Nişantaşi, Istanbul.As of December 2018, Ipekyol has 142 stores across Turkey and is exporting its products to seven other countries including Saudi Arabia, Cyprus, Qatar, Bahrain, Kuwait, Northern Iraq and Azerbaijan.
- Trendyol: Being one of the biggest fashion e-commerce platforms in Turkey today, Trendyol was launched in 2009 by Demet Mutlu after dropping out from Harvard Business School’s MBA program. Trendyol accounts for over 60% of online fashion sales in Turkey, working in partnership with over 2000 brands along with its own private brands and selling over 70 million items per year. The platform offers a wide variety of fashion clothing and accessories from big brands such as LC Waikiki, Mango, Koton, Guess, Pierre Cardin, Vero Moda, Nine West, Hummel, New Balance, DeFacto, Mavi, Ipekyol and a host of others. As of December 2018, Trendol has over 15 million customers with an annual growth rate of about 90%. After its

investment and strategic partnership with Alibaba Group in 2018, Trendyol being one of the leading e-commerce platform in Turkey will now have support from its new partner in the field of technology, mobile payments, logistics and international contacts.

The Turkish online fashion market is not limited to the above mentioned suppliers, as there are hundreds more of suppliers and distributors of ready-to-wear clothing and accessories in Turkey. Be it a branded house like LC Waikiki and DeFacto or a house of several brands like Trendyol and Morhipo, there are multiple strategies that must be put implemented to get the potential customers on board with online shopping.

A brief study was made on 20 (twenty) online fashion suppliers about which internet marketing strategies they are using to get to the potential customers. Selling goods online online requires a website which they all have, but optimizing the websites for mobile platform to make them better for mobile phones and tablettes, using social media, having mobile applications that can be downloaded on playstore or app store, affiliating with other blogs and online shopping platforms, some suppliers have all these strategies in place and others have only some of these strategies in place. All these suppliers acknowledge the influence of social media on their sales, thus each one has at least a page on Instagram or Facebook or both.

Table 2.3: Turkish fashion suppliers and their internet marketing strategies

	Company Name	Internet Marketing Strategies			
		Website	Mobile Platform Optimized	Social Media	Mobile App
1	LC Waikiki	www.lcwaikiki.com	Yes		
2	De Facto	www.defacto.com.tr	Yes		
3	Ipekyol	www.ipekyol.com.tr	Yes		
4	Trendyol	www.trendyol.com	Yes		
5	Morhipo	www.morhipo.com	Yes		-
6	Mudo	www.mudo.com.tr	Yes		
7	Btm Moda	www.btmmoda.com	Yes		-
8	Cetinkaya	www.cetinkaya.com.tr	Yes		-
9	Bershka	www.bershka.com	Yes		
10	Le Fon	www.lefon.com.tr	No		-
11	Shoetek	www.shoetekfiyat.com	Yes		
12	Boyner	www.boyner.com.tr	Yes		
13	Beymen	www.beymen.com	Yes		
14	Vakkorama	www.vakkorama.com	Yes		

Table 2.3: (con) Turkish fashion suppliers and their internet marketing strategies

	Company Name	Internet Marketing Strategies			
		Website	Mobile Platform Optimized	Social Media	Mobile App
15	Damat Tween	www.damattween.com	Yes		-
16	Mavi	www.mavi.com	Yes		
17	Zaful	www.zaful.com	Yes		
18	Zafoni	www.zafoni.com	Yes		
19	Koton	www.koton.com	Yes		-
20	Hatemoglu	www.hatemoglu.com	Yes		-

2.2 Components of E-CRM

There have been several authors of eCRM and each one of them has broken down the concept of eCRM in different ways. In order to satisfy the ever changing expectations of customers, eCRM systems seek to develop the traditional CRM techniques by bringing in new electronic channels and technologies and integrating with e-business applications into the organization's strategies. Iftikar & Atuar (2008) and Ismail & Hussein (2015) have classified the concept of eCRM into three categories; pre-purchase eCRM, at-purchase eCRM and post-purchase eCRM. It is of essential importance to the organization to focus on attracting and keeping economically valuable customers and eliminating less profitable ones (Romano & Fjermestad, 2001). A critical analysis of each of these features will be done on the selected companies of the Turkish fashion industry under study.

2.2.1 Pre-purchase E-CRM

From the attraction phase of the customer lifecycle- there are certain aspects of consumers' buying behaviour that can be influenced by putting in place the right strategies. Converting a potential customer to a loyal customer must begin with first time purchase, and the level of satisfaction from the first purchase has great influence on the consumer's decision to repeat the purchase. Pre-purchase e-CRM features are those features that are related to activities performed by customers prior to placing an order. In the context of Turkish Fashion Brands, webstore properties and product characteristics will be considered.

2.2.1.1 Webstore properties

Online stores all have websites in which they advertise their products and the properties of these websites play a vital role in convincing the potential customer that buying the product is a good decision. Web stores have very distinct advantages to offer but also come with some disadvantages as compared to physical stores. It is not possible to touch and feel the product on the webstore and sometimes customers worry that the products they see on the website might look good on pictures and less attractive when delivered.

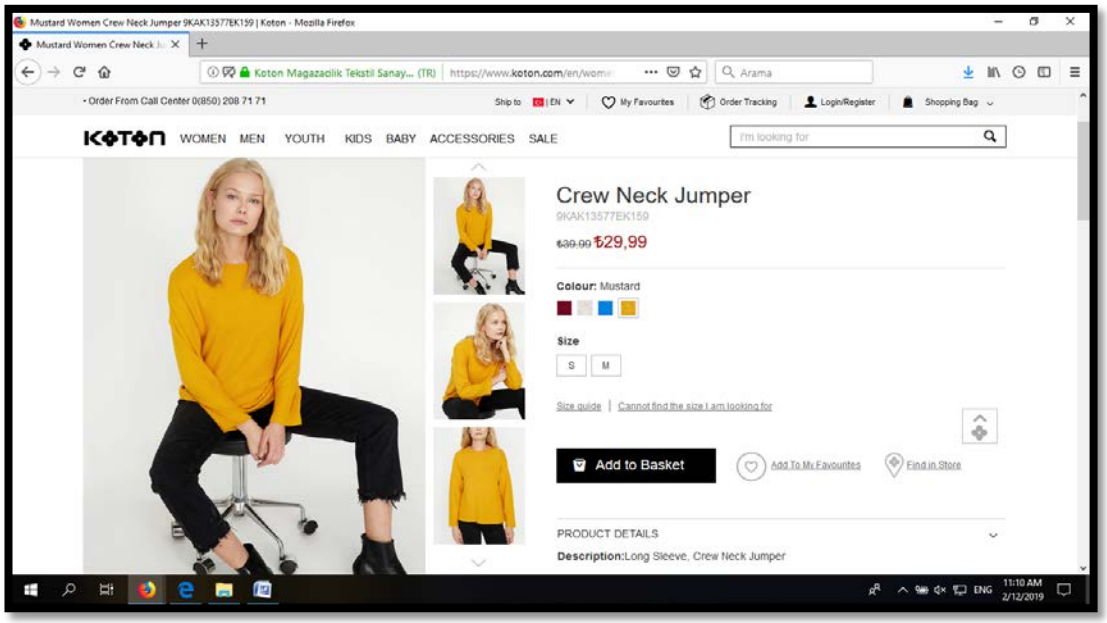


Figure.2.5: Product presentation on KOTON website

Source: *www.koton.com*, Access date: 02 Dec 2019

Because of diversification and an excess variety of fashion brands in Turkey, consumers dedicate a considerable amount of time to make their choice of what to buy among alternative products. How products are presented on the website indirectly helps buyers to make that choice. The importance of well-organized page content, visually appealing websites, ease of navigation and detailed presentation of products characteristics alongside the images is also emphasized.

2.2.1.2 Product variety

Another important factor that influences customer decision in online shopping of fashion brands is the product search. Having a wide range of products in one

place makes it easy to access a variety of similar products in very little time. When pages are visually appealing and easy to read, it becomes easier to browse through a wide variety of products in very little time. Fig. 2.6 shows a page from the KOTON website, one click on ‘women’ shows a wide range of women’s clothing and accessories available on the website. Having so many products in one place is also an advantage to the seller because it makes buyers notice products they were not aware of.

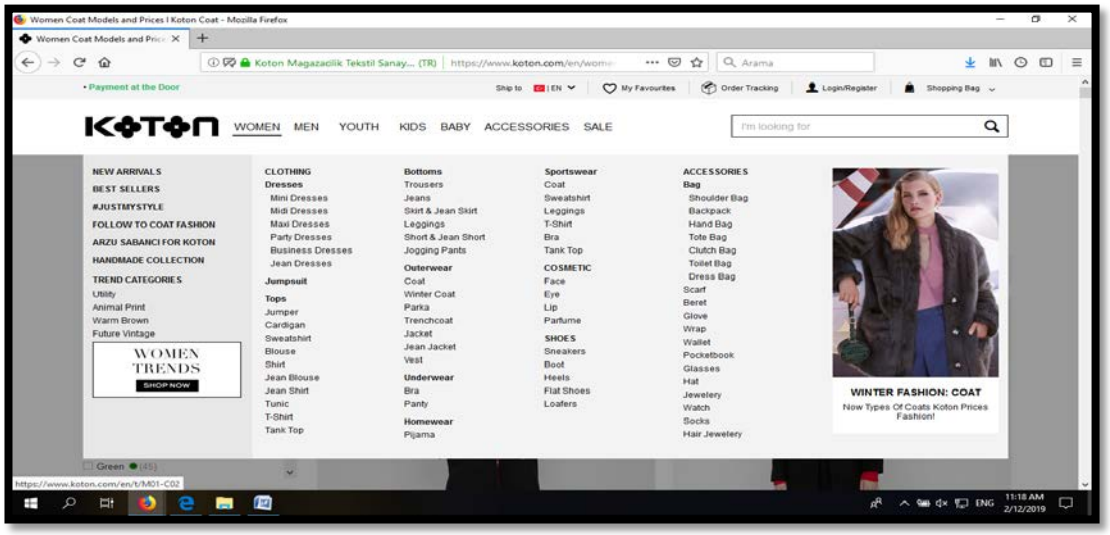


Figure.2.6: Wide variety of products on KOTON website

Source: *www.koton.com*, Access Date: 02 Dec 2019

A consumer who finds these pre-purchase features appealing will definitely proceed to make a purchase. To achieve customer satisfaction at this stage, web stores need to design their systems around customer needs. Webstore designs should focus on what appeals to the prospective and existing customers, and should not be too complex but accessible by anyone with basic knowledge of how the internet works.

2.2.2 At-purchase E-CRM

Once a buyer has made a choice and decision to make purchase, the value he desires is transferred to the purchasing process. Hence, sellers too must ensure that the purchasing process in itself is geared towards making the customer want to complete the purchase by keeping it as simplified as possible. Features of at-purchase eCRM focus on pricing, convenience, simplicity, as well as risk and

security. In this study of Turkish fashion brands, these features will be grouped into three; price and cost features, convenience features, and risk and security features (Khalifa & Shen, 2005).

2.2.2.1 Price and cost features

Price happens to fall in the category of factors that significantly affect customer's buying decision and the cost of online shopping too is not under looked. True, most products sold online are cheaper than the price at which they are sold in physical stores; especially the websites owned by the manufacturers themselves. This is because the product didn't have to go through middlemen and long distribution channels and thus, are sold at the price fixed by the manufacturer. Sometimes, products are sold at very good prices but have shipping charges that discourage customers from buying online. Some sites have a minimum bar for placing orders, and orders which are less than that minimum amount are not approved for shipment. Others offer free shipment but only if your order surpasses a certain amount.

Dynamic pricing is another aspect of online shopping, an approach where product prices are very flexible following a time based strategy. Kotler (2016) defines dynamic pricing as a method where prices are adjusted continually to meet the characteristics and needs of individual the customer and situations. This practice allows sellers to sell products at different prices at different prices based on the changing market conditions, particularly charging higher prices when the demand is greater. Product prices are continually adjusting, sometimes in a matter of minutes.

Some sellers understand that this strategy can lead customers to the competitor if customers find out that they paid more for the product than others before or after them, so they stick to fix pricing strategy. Fixed pricing is consistent and permits the seller to forecast sales and profits, and since customers get used to the fixed prices, there is little risk of offending them with constantly fluctuating prices.

2.2.2.2 Convenience features

Simplicity and convenience are other important aspects to note in online shopping. The ease with which a customer can place an order and the simplicity

of the process has an influence on purchase decisions. Some sites require that the customer creates a user account to be able to buy from them, some require personal information about the customer, some require that the customer pays with a master card or visa card, others require prepayment to approve purchase before shipment.

Turkish fashion websites have simplified online shopping to the point that with or without user accounts, customers can buy from them. They only require a delivery address and an email address to which they can send your invoice. The variety of payment methods they offer is also an added advantage; customers can opt to pay for goods online or pay when they have been delivered to their homes either with cash or credit/debit cards. Notwithstanding, the payment-upon-delivery method gives the buyer some level of trust in the seller, since he only gets to pay for the products that he has received. There is very little risk of online fraud where customers pay for goods that will never get to them.

2.2.2.3 Risk and security features

Most often than not, buying online requires entering some personal information and information about credit/debit cards to pay for the goods. Many buyers are sceptical about this stage of purchase as there have been several cases of customers' accounts being hacked through online purchases, hence they need to be able to place their trust in the seller to provide a safe environment for the financial aspects of their purchases. If the buyer feels his personal information will not be well protected on that site, he will rather find a site that seems to be more trustworthy or offers payment upon delivery.

Review pages are very important for online shopping sites because customers tend to trust the words of satisfied customers more than adverts and publicity stunts. Positive reviews from satisfied customers make a potential buyer believe that he is making the right decision as satisfaction is guaranteed. The features of at-purchase eCRM are very important in the purchase decision as they determine whether or not, the customer will finalise the purchase. The simplicity of the purchase process, pricing methods, product customization, and purchase conditions like delivery terms, return policies and guarantees should be designed to satisfy the customers' needs.

2.2.3 Post-purchase E-CRM

Once a customer approves the purchase of a product online, the required value is transferred to the delivery process. The customer expects the delivery terms to be met in stated time (Irantaj, 2018). It is important to respect the exact delivery date especially when payment is expected upon delivery. Each site has its own delivery terms and period. Some websites and products take less time to deliver than others.

2.2.3.1 Delivery level features

At the delivery level, it is important to manage delivery time, order tracking and return policies. Customers expect that after placing their orders, products should be delivered in stated time. The customer will exercise patience but only for as long as it was stated on the delivery terms before the order was placed.

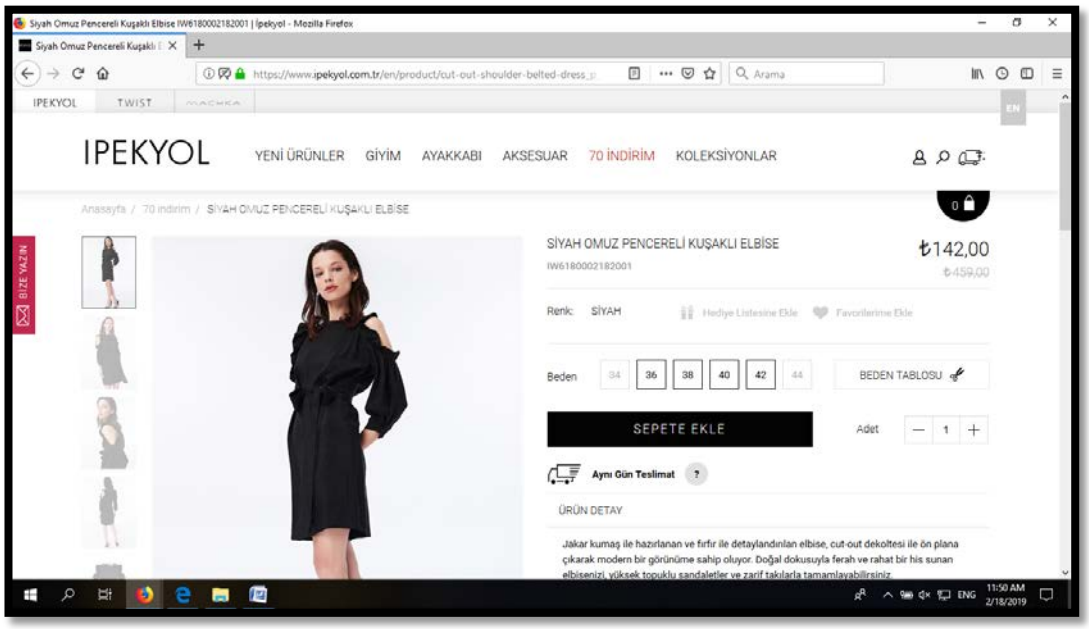


Figure 2.7: Online shopping on Ipekyol

Source: *www.ipekyol.com.tr*, Access Date: 02 Dec 2019

Fig 2.7 shows a typical example of a product on IPEKYOL website, it shows that this dress can be delivered to the buyer on the same day he place the order. A customer placing an order for this dress will expect delivery to be made in less than 24 hours. Fig 2.8 on the other hand shows a product on SHOETEKFIYAT website, which says the product will be delivered in 4-6 days and the customer will expect to receive the products within this period.

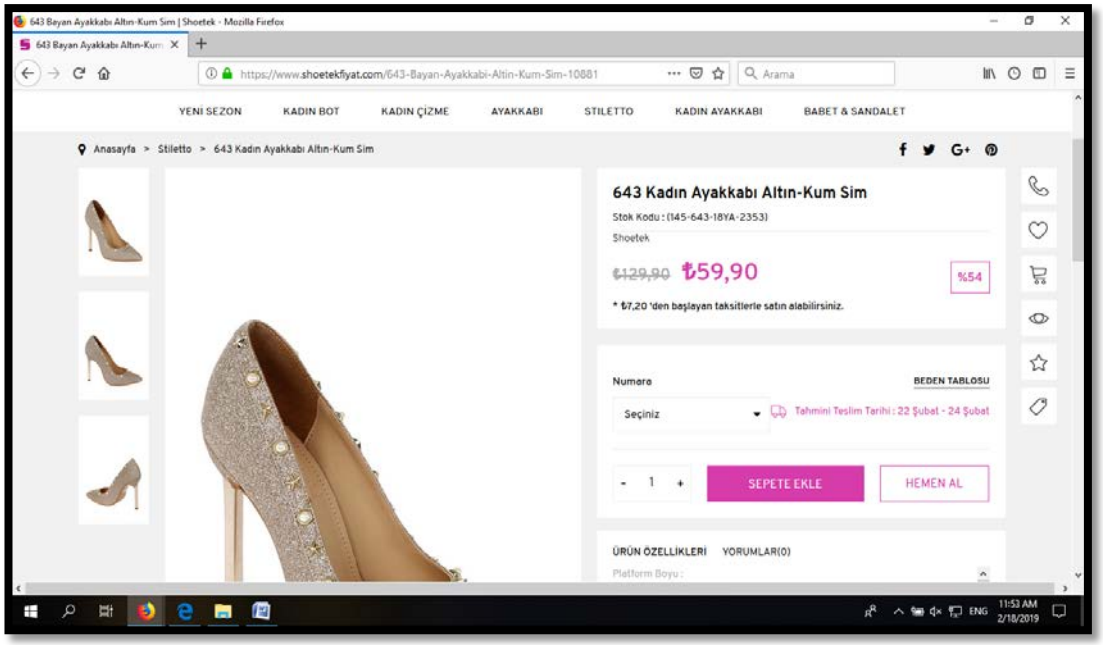


Figure 2.8: Online shopping on Shoetekfiyat

Source: *www.shoetekfiyat.com* Access Date: 02 Dec 2019

The order tracking feature is also an important aspect of online shopping, but only a few Turkish fashion websites have this feature. Fig 2.9 below shows an example of order tracking on Shoetekfiyat website. Once the order is placed, the seller sends the invoice to the email address provided and the order tracking code.

Delivering the product on time and giving the customer the possibility to track their orders until delivery is made will give the customer great satisfaction. But the seller also needs to provide a possibility of returning the product if it doesn't meet the customers' expectations. There are often times when customers like the photos of the products they see online and then regret buying it when the product is delivered, maybe because of the product quality, wrong size, improper finishing, mismatch of pairs, or colours.

There are very few reasons why a customer might want to return the product but the seller should consider this possibility and make it easy for the customer to return products that don't satisfy their needs correctly.

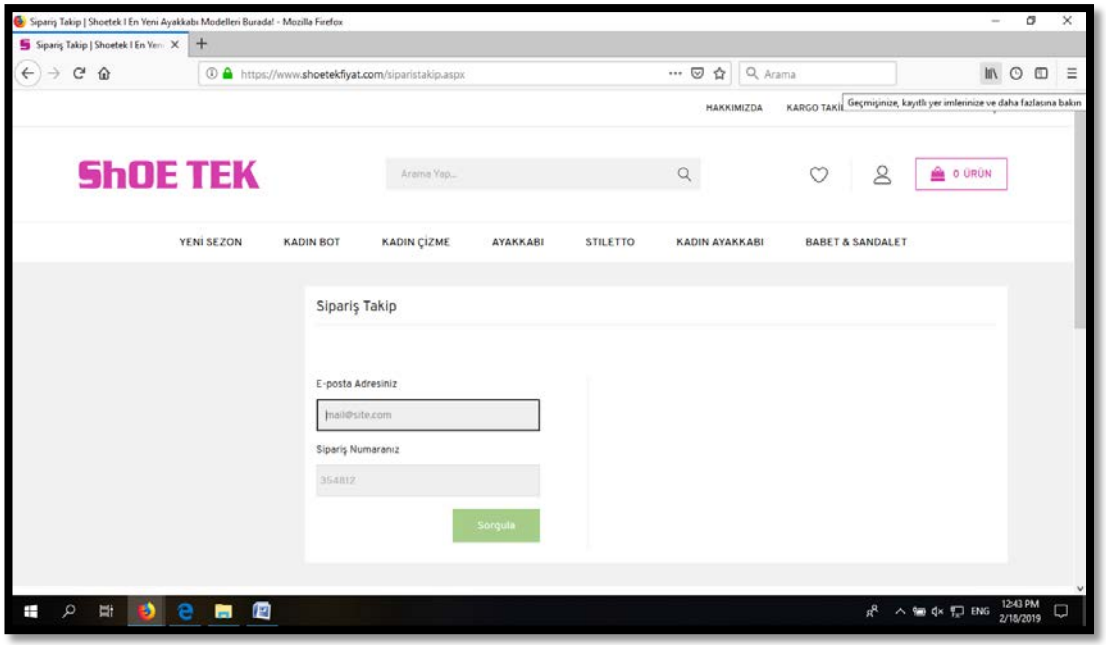


Figure 2.9: Order tracking feature on Shoetekfiyat website

Source: *www.shoetekfiyat.com* Access Date: 02 Dec 2019

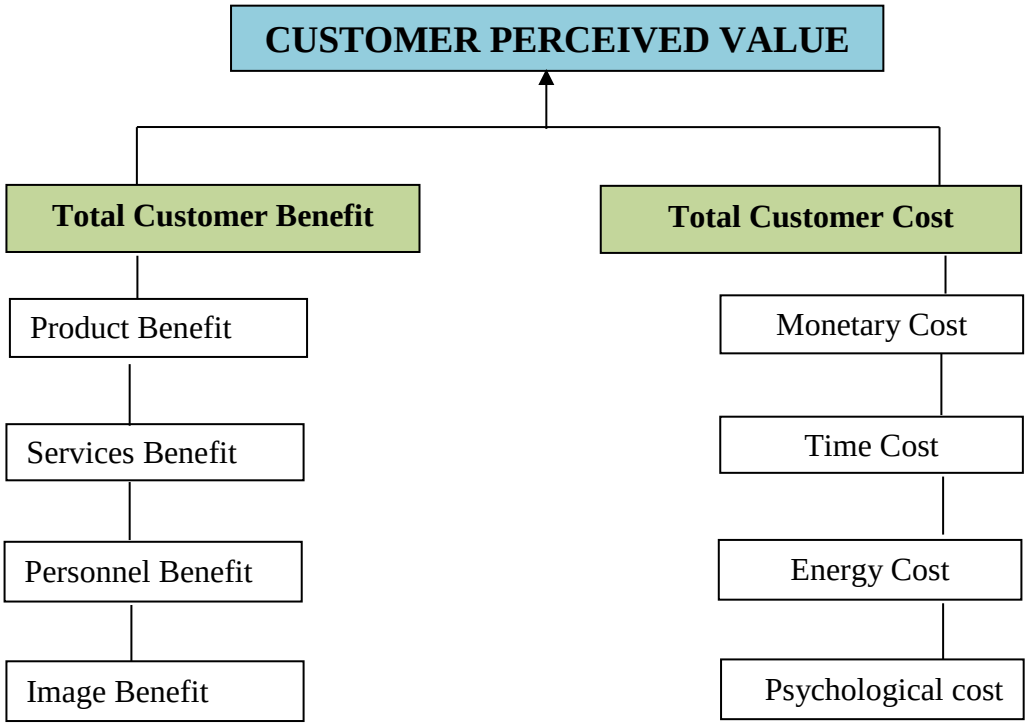
Researchers in previous years claim that there exists a significant influence of eCRM on online customer satisfaction, but without concrete conceptual and empirical evidence, it is not easy to assess e-CRM activities or measure eCRM success. Breaking down the concept into these three components gives an edge to estimate which features of eCRM have more influence on customer satisfaction than others. So, looking at eCRM from the perspective of online fashion customers, customers desire a high level of satisfaction from the goods that they purchase online without which they will consider buying from another seller next time.

E-CRM in the Turkish online fashion market is a competitive process that must be ensured by the seller from start to finish, and the presence of so many competitors makes it even more important because failure to satisfy a first-time buyer will not lead to repeat purchase. How each seller manages each step of the purchase process may vary but they all have the same target which is to attract and keep the customer, hence they design marketing strategies that target the customers' interest every step of the way.

2.3 The Power of Customer Satisfaction

In lay man's terms, customer satisfaction is the degree of pleasure a customer gets from purchasing and using a product. In order that the customer be satisfied with this product, it must meet or surpass his expectations. This level of satisfaction is a vital determinant in whether or not the customer will consider buying the product again or buying other products from the same supplier. Kotler & Keller (2016) define customer satisfaction as a "product's perceived performance relative to customer's expectations." This definition is better explained by the concept of customer perceived value, where the perceived value is measured by weighing the total customer benefit and the total customer cost, and customer delivered value which is measured by weighing the total customer value and the total customer cost.

Table 2.4: Determinants of Customer Perceived Value



Source:KOTLER, P. & KELLER, K. L.**Marketing management** 2016 - Pearson – Harlow

Every customer has a bar of expectations in mind when deciding whether to buy a product or not. These expectations come in the form of desired benefits and forecasted costs. Table 2.5 above shows the determinants of customer perceived

value with total benefit on one side and total cost on the other. The customer evaluates the product benefit, services benefit, personal benefit and image benefit. On the other hand, he also considers what it will cost him to acquire the product in terms of monetary cost, time cost, energy cost and psychological cost. If the benefits outweigh the cost, then he can decide to buy the product.

Although many marketers are yet to understand that "the final objective of customer satisfaction measurement should be customer loyalty" (Sivadas & Barker-Prewitt, 2000), others are using this concept of customer satisfaction as a management tool to build profitable customer relationships, gain customer trust, improve service quality.

2.3.1 Customer lifecycle

The evolution of a customer from the first point of contact to the stage of loyalty is on the figure below. Every loyal customer goes through the five stages progressively from being a prospect to a loyal customer.

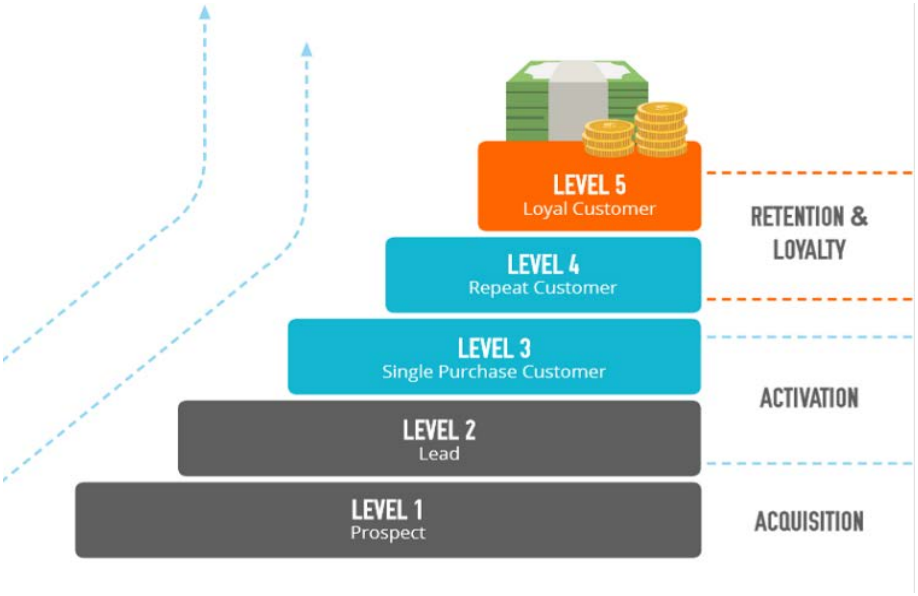


Figure 2.10: The five stages of customer development

Source: Ometria Academy, 2014. https://ometria.com/blog/customer-lifecycle-marketing-how-to-build-a-sales-and-marketing-machine*)*

A portion of every company's customers especially in the B2C market end at stage 3 and only those satisfied with their first purchase will go on to repeat purchase and eventually become loyal customers. Hence, relationship

management at each stage is important to carry the customer through to the point of loyalty. Most companies fail to take their customers beyond stage 3 (single purchase customer) because they focus more on attracting new customers and neglect the aspects that would have encouraged their existing customers to buy again. Looking at the customer lifecycle in figure 2.11 below, the customer equally goes through five stages from being a prospect to becoming an advocate for the sellers' brands.

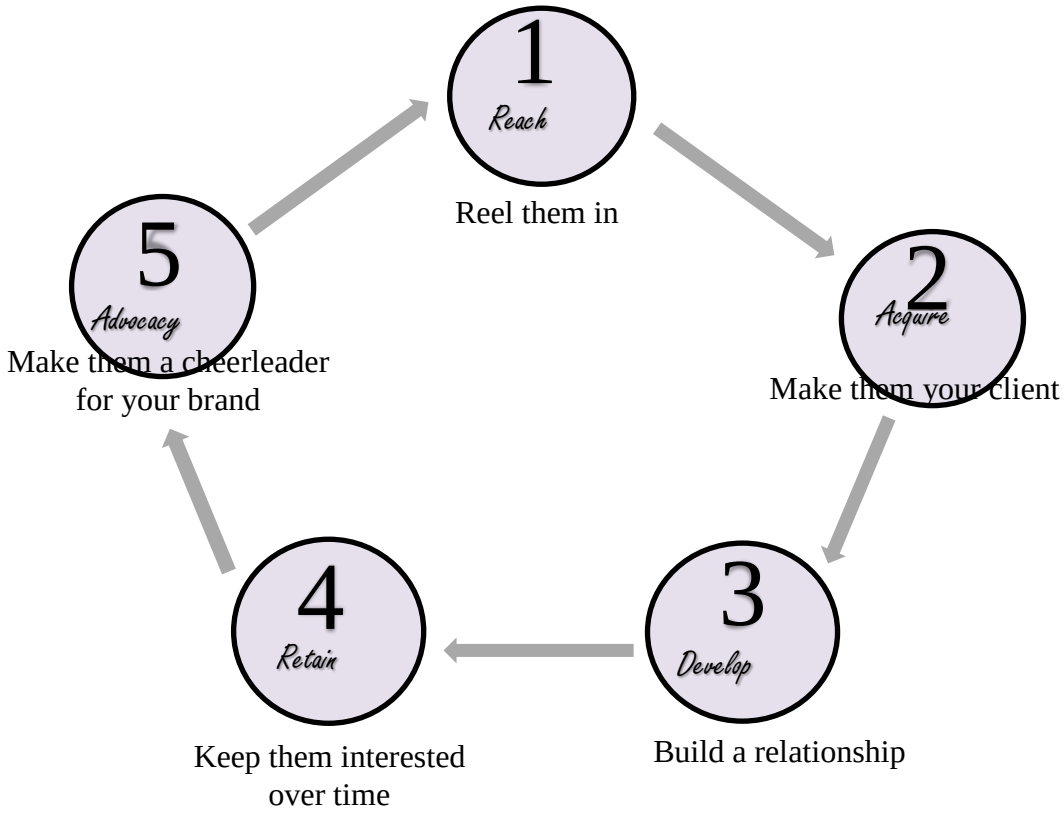


Figure 2.11: The 5 stages of the customer lifecycle

Source: Cooper, M. 2014, February 14. Customer Life Cycle Management in 5 Stages. Retrieved from www.business2community.com

2.3.2 Customer attraction

Before a potential customer gets attracted to a specific product, he must have consciously or unconsciously identified a need for the product and already has in mind a small idea of what he needs exactly. In this context of the Turkish fashion sector, competition is quite intense as there are too many brands selling

similar products. The availability of product variety also makes it harder for the customer to pick one among multiple brands thus, each customer has a different factor influencing his decision and choice (Khalifa & Shen, 2005). While some customers are attracted by price, others are more interested in quality while some are more interested in the level of convenience attached to the chosen brand. It is therefore the seller's place to pinpoint on the factors that make his brand outstanding and bring it to the forefront.

2.3.3 Customer retention

Attracting a customer is not enough to make a reasonable level of income, the customer needs to be convinced that buying the product will be a wise decision and he will have no post-purchase regrets or cognitive dissonance. Getting customers to repeat purchases over and over requires a collection of activities that will influence this decision. In order to reduce the number of customers a company losses over time, customer retention strategies must be put in place. It could be in the form of customer loyalty programs, building trust through relationships, improving KPI's around customer service, listening and acting on customer complaints on time, personalizing customer communications, and more.

2.3.4 Customer loyalty

In a study by Alhaiou (2011) evaluating the contribution of various eCRM features to customer loyalty at different stages of the customer lifecycle, he established that the use of eCRM to build customer relationships positively influences customer satisfaction and loyalty. With the birth of new eCRM technologies, it has become possible for a company to customize the customer experience to an individual (Kennedy, 2006), making it easy to retain customers by making their products customizable according to customer data, purchase patterns, frequently viewed products, indicated likes and favourites, among others. If eCRM strategies focus on customer as their end game, customer loyalty will follow suit because a satisfied customer will have reason to repeat their purchase.

The primary aim of eCRM is to increase customer service, retain customers, provide analytical capabilities, increase customer value and use the proper

methods to encourage customers to remain loyal (Zineldin, 2006). This implies that for customer loyalty to be attained, companies must seek ways of maximizing their revenue and profits while minimizing costs in a manner that will provide the customers the level of satisfaction they desire. Customer loyalty therefore, will be easily attained if the eCRM strategies are designed to make transactions easier to carry out, more useful, less time consuming and less costly for the customer.

2.4 The Importance of Customer Satisfaction

It is evident that customer satisfaction is considered the most desired outcome of every marketing activity. This is because satisfied customers leads to profitable business. The relationship between the company and its customers has an important part to play in the success and growth of the company and acts as a catalyst to all its growth strategies. The level of customer satisfaction determines whether the business is thriving or barely surviving. According to Chaffey (2015), non-financial transactions such as customer support and requests for further information play an important in e-commerce transactions. Implementing the right strategies will give customers good reason to continue buying the company's products. The advantages of customer satisfaction can be seen in the following;

- Good customer satisfaction helps to maintain good and mutually beneficial relationships between the organization and its customers. For this to happen, the organization needs to keep delivering value time and time again to keep the customers satisfied.
- Good customer satisfaction influences profitability. This is so because the more satisfied the customers are, the more they will to buy your product and also have their close relations use your product.
- It improves customer retention rates; as long as the organizations provides satisfactory products and services to its customers, they will have no reason to stop consuming their product or to choose a competitor's brand in its place.

- Satisfaction leads to loyalty; if a customer is satisfied with the products they bought from you, they are most probably going to buy the product again. Most importantly, maintaining an already paying client is cheaper than to acquiring a new one.
- Satisfaction improves advocacy in the form of word of mouth. Satisfied customers will recommend your product to their network of friend and family and this is a very efficient form of marketing because small businesses affirm that 85% of their new leads is generated by word of mouth.
- Happy customers means happy employees; especially sales agents who have to deal with customers on a daily basis will be happier working with satisfied customers because the unsatisfied customer is not very easy to handle.

2.5 Understanding E-CRM Success

There are three dimensions through which eCRM implementation can address customer optimization;

- To increase the number of new customers through acquisition.
- To increase the company's profitability by giving your customers reason to patronize your products and services more.
- To keep the customers coming back for more purchases through retention strategies.

In order to acquire these results, it will require some important changes in organizational culture and operations of the company by adopting a customer-centric management process. Nowadays, consumers constantly demand careful, continuous and useful communication with company representatives; they can be concerned with their orders, payment method, refund policies and require help with products/services they have purchased (Sigala, 2011). If the duration of customer satisfaction is increased continuously, it will gradually influence customer loyalty.

Competition in the e-commerce sector is fierce, and even worse in the online retail sector of Turkish fashion which is the top selling sector of e-commerce in Turkey. Surviving this level of competition will not be easy unless the e-commerce entrepreneur choose and implement the right strategies. In addition, the application of eCRM gives the company a clear understanding of customer behaviors and portrays desired aspects effective marketing and implementation (Ahmed, Maati & Mohajir, 2015). The customer buying behavior is influenced by their needs and wants, and their decision to make a purchase is primarily to satisfy these needs, competitive advantage will be gained if the seller is able to identify and satisfy these needs.

To build and maintain higher levels of success in eCRM, companies need to focus on high level of improvement in customer satisfaction, transaction amounts and frequency, image, efficient business processes, effective database management, technology utilization, and innovation in services that can provide companies with significantly high levels of perceived eCRM success (Kimiloglu & Zarali, 2008).

3. CONCEPTUAL FRAMEWORK DEVELOPMENT AND HYPOTHESIS FORMULATION

This chapter will discuss the variables that have been considered in the formulation of related hypothesis, taking into consideration the research questions. Hypothesis will be formulated and the conceptual model will be presented.

3.1 Definition of Variables

The purpose of this research is to test the effect of the different eCRM features on online customer satisfaction and loyalty. ECRM as previously seen in chapter 2 has been broken down into three components; pre-purchase eCRM, at-purchase eCRM and post-purchase eCRM. These components are elaborated on the theoretical model of study in figure 3.1 to show how each one of them affects customer satisfaction and loyalty.

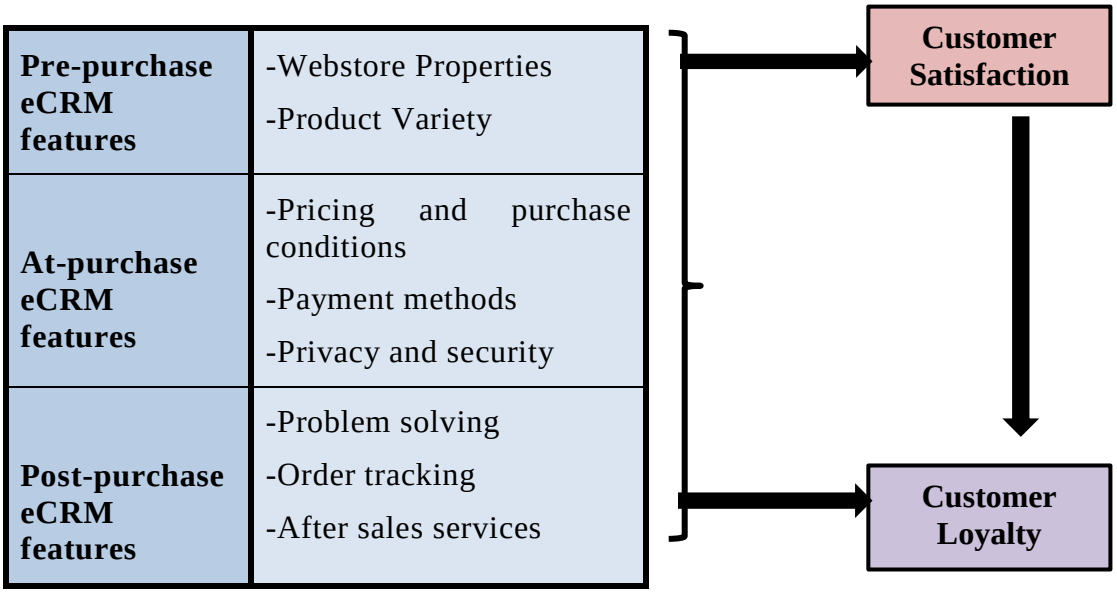


Figure 3.1: Theoretical framework of the study

This model describes the framework of variables that will be examined in the course of this study. Based on the eCRM triumvirate used in previous studies by Feinberg et al (2002), Lu (2003), Khalifa & Shen (2005), eCRM has been divided into three components. Since this study is focused on the Turkish fashion market, only components of eCRM features that are applicable to the fashion market will be used. The eCRM features are independent variables while customer loyalty is the dependent variables. Customer satisfaction acts as a mediating variable between eCRM implementation and customer loyalty.

- Pre-purchase eCRM features: In this context of e-commerce, pre-purchase eCRM in the fashion market focused mostly on webstore properties and availability of product variety as previously seen in chapter 2. How the website is designed, quality of information presented, ease of access, display of products, average wait time; these factors influence a buyer's decision to purchase the product or search from other seller. Customer attraction strategies at this point are very essential and the seller needs to put forth the most appealing aspects of bestselling products in his collection.

- At-purchase eCRM features: After the customer goes through the attraction phase, browses through the products that fit the description of what he wants to buy, he will like to know the purchasing conditions before placing an order; price of the product, available discounts, delivery terms, return policies, payment methods, privacy and security. As previously seen in chapter 2, these components of at-purchase eCRM have been grouped under three subparts; pricing and purchase conditions, payment methods, privacy and security. Conditions attached to acquiring the product should align with the individual customer needs.

- Post-purchase eCRM features: When a customer makes decides to make a purchase, he also considers the post-order phase of the purchase. At this point, the seller needs to out in place strategies that will reassure the customer that he is making the right choice. In the internet market, it is very easy for customers to get sceptical about buying a product because often times, they wonder if the product will eventually be delivered, how long it will take for delivery to be made, if the actual product will be as

good as the description on the website. Post-purchase eCRM therefore focuses on the transactions that occur after the customer has placed the order; managing the average delivery time, product tracking option, after-sale services.

- Customer satisfaction: Customers who feel satisfied from their relationship with the firm will obviously consider being loyal to the firm (Licata & Chakraboti, 2009). Turkish fashion distributors are therefore inclined to implement marketing and sales strategies that will grant maximum satisfaction to the customer. The benefits of having satisfied customers are uncountable, especially in a sector where competition is fierce. There are hundreds of Turkish fashion distributors with wide variety of product offerings seeking to attract new customers or get competitors' loyal customers to notice their own brands. This gives the customers an upper hand because distributors will always seek to retain them by doing whatever it takes to keep them satisfied.
- Customer Loyalty: The loyalty of a customer depends solely on how satisfied the customer is with the first purchase. Alim & Ozuem (2014) mentioned that eCRM characteristics are effective in reinforcing relationships with customers and promoting the development of an attractive virtual community which significantly impacts customer satisfaction and loyalty. With online customer satisfaction being a mediating variable between eCRM implementation and customer loyalty in the online market of Turkish clothing, it implies that loyalty will be minimal if satisfaction is absent. The eCRM features independently have some level of influence on loyalty but not enough to hold the customer who is not satisfied enough.

3.2 Research Framework and Tested Hypothesis

According to literature from earlier studies and the objectives of this study, the conceptual model was adapted and designed to help establish the existing correlations between the explained variables and figure out the influencing factors between them. The conceptual model consists of five (5) variables; with one also acting as a moderating variable between them. Seven hypothesis were

formulated based on the literature of these variables and were tested on the Turkish fashion market in the e-commerce sector.

3.2.1 Pre-purchase E-CRM

Pre-purchase eCRM stands at the forefront of every potential relationship that can exist between the organization and its customers, thus its features must be good enough to make the potential customer want to continue to the actual purchase. The presentation of the website and its contents, ease of navigation, average wait time, search capacity and presentation of product characteristics are all components that can affect the customer's decision.

The following questions posed determine the influence of pre-purchase eCRM features on consumers' decision to make purchase;

- Are display pages within the platform easy to read?
- Do images of products show product features well enough?
- Are product characteristics well presented alongside images?
- Are webpages visually appealing?
- Is it easy to access variety of products when buying online?
- How long does it take to search for products?

To attempt responses to these questions, the significance of the effect of pre-purchase eCRM on online customer satisfaction and loyalty in the Turkish Fashion sector will be tested through the following hypothesis;

H1a: Effective application of pre-purchase eCRM has a significant effect on online customer satisfaction.

H1b: Effective application of pre-purchase eCRM has a significant effect on customer loyalty.

3.2.2 At-purchase E-CRM

This stage is often considered the stage where the suppliers and the customers make negotiations and agree on terms and conditions of their transaction. It is therefore of great importance that security and privacy be considered to reduce any perceived risk and give clients sufficient confidence and a greater feeling of

security in performing the online transaction (Kim, Chung & Lee, 2011; Rozita, 2012; Olupot & Kituyi, 2013; Küster et al, 2016). If the customer is comfortable with the purchase conditions, he will want to complete the purchase. This means that there is more to customers' buying behaviour than the physical product, services attached to the product itself also influence the customers' final decision. No matter how appealing the physical product may be, if other factors like price, convenience, security, terms of payment and delivery do not favour the customer then he won't finalize the purchase.

The following questions posed determine the influence of at-purchase e-CRM on a buyer's decision to finalize the purchase and consider making more purchases in the future;

- Are product prices encouraging?
- Is it more convenient to buy online rather than physical store?
- Are payment methods convenient for the buyers?
- Are customers' information entries on the website safe?
- Is personal information of customers well protected?

To attempt answers to these questions, the significance of the effect of at-purchase e-CRM on online customer satisfaction and loyalty in the Turkish Fashion sector will be tested through the following hypothesis;

H2a: Effective application of at-purchase eCRM has significant effect on online customer satisfaction.

H2b: Effective application of at-purchase eCRM has a significant effect on customer loyalty.

3.2.3 Post-purchase E-CRM

At this stage, the customer must have made the decision to purchase. Now he needs reassurance that what he has ordered will be delivered in stated time, and the product will not be beneath expectation of the customer. After sale services play an important role at this stage as it will assure the customer that they made the right choice by buying the product. Whether the customer decides to repeat

purchase or not depends largely on the level of satisfaction he attains at this stage.

The following questions posed determine the influence of post-purchase e-CRM on the level of satisfaction acquired and the customer's decision to repeat purchase in future;

- Are customers satisfied with the products delivered to them?
- Are customers able to track their products after placing the order until delivery is made?
- Is it easy to return products that do not satisfy customers' needs properly?

To attempt answering these questions, the significance of the effect of post-purchase e-CRM on online customer satisfaction and loyalty in the Turkish Fashion sector will be tested through the following hypothesis;

H3a: Effective application of post-purchase eCRM has a significant effect on online customer satisfaction.

H3b: Effective application of post-purchase eCRM has a significant effect on customer loyalty.

3.2.4 Online customer satisfaction and customer loyalty

Online customer satisfaction with respect to this study stands as a mediating variable between eCRM and customer loyalty. According to Anton (1996), customer satisfaction is a direct link to customer loyalty, and will yield the same results if applied to the Turkish fashion sector. This is because the Turkish fashion sector is highly competitive especially the e-commerce sector, if a customer is not satisfied at any point then he will rather just switch to a competitor. Since organizations realized that retaining already paying customers is more economical than seeking new ones (Pan & Lee, 2003), customer retention has become an important aspect of almost every organization's marketing strategy. Distributors of fashion items in Turkey are introducing loyalty schemes into their sales strategies to reward customers who repeat purchase.

The following questions posed determine the influence of customer satisfaction on consumers' decision to repeat purchase and stay loyal to the brand;

- Does the platform consider clients' personal details to provide customized products and offers?
- Does the site attend to customer complaints accurately?
- Does it take genuine interest in resolving customer problems?
- Is the sales process designed to satisfy the customer's needs?
- Is the customer satisfied enough to keep using the platform for purchases?

To attempt answering these questions, the significance of the effect of online customer satisfaction on customer loyalty will be tested through the following hypothesis:

H4: Online customer satisfaction has a significant mediation effect between eCRM and customer loyalty

3.3 Conceptual Model

After formulating the various hypotheses to be tested, a clear picture of these testable relationships will be indicated in a conceptual model of the study. The above mentioned variables that have served as a basis for testing the relationship between eCRM and online customer satisfaction and loyalty as well as aiding in analysing and interpreting the empirical results of the study. After testing the operational relationship and the influence of eCRM on online customer satisfaction and loyalty in the Turkish fashion sector, it will be easier to justify which of the eCRM features affects customer satisfaction and loyalty the most, and to what extent.

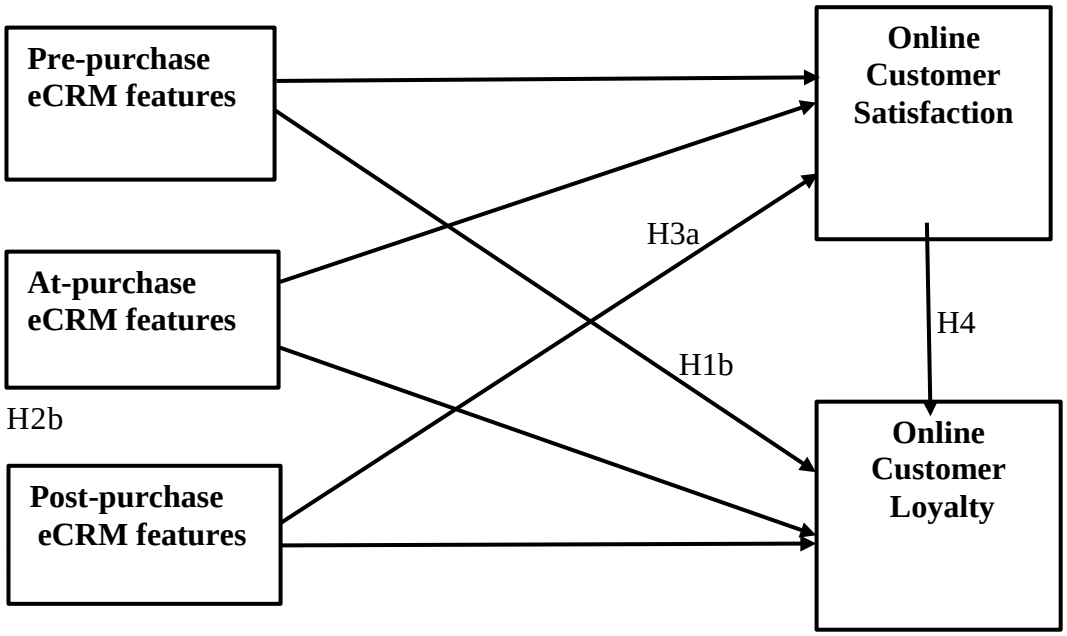


Figure 3.2: Conceptual Model of the Study

4. RESEARCH METHODOLOGY

4.1 Introduction

People living in Turkey are very excited when it comes to buying goods online and majority of online shoppers in Turkey buy clothing. According to the Ystats (2019) report, clothing is ranked number one on the e-commerce list and the Statista (2019) report shows that average annual revenue per user in the e-commerce segment of Turkish fashion buyers amounts to USD237.8 in 2019. It is for this reason that this research takes a deeper look into identifying the factors fuelling the tremendous growth in this sector in recent years by looking at the components of eCRM implementation. The eCRM features have been divided into three components; these eCRM features are the independent variables that contribute to online customer satisfaction directly and to loyalty directly and indirectly in different proportions. Seven hypotheses have been formulated and implemented to test the relationships existing between the variables, and equally measuring the mediating effect of online customer satisfaction on customer loyalty.

This chapter therefore, explains in detail the methodology employed in the course of the study and elaborates on the research design, characteristics of the population under study, sample and sampling methods used, survey instrumentation and data collection tools.

4.2 Research Design

The customer base of online clothing buyers in Turkey is very large, therefore a quantitative approach will be used. Saunders et al. (2009) define quantitative research as a process of gathering numerical data from a large amount of involved participants through which a particular phenomenon or hypothesis is explained, tested or verified empirically. Primary data will therefore be collected and analysed for this study. The required data was collected from a

wide variety of online fashion buyers living in Turkey, self-administered questionnaires were issued to respondents in the targeted area and based on the numerous advantages of online questionnaires; eliminating survey related costs, time efficiency, less social pressure on respondents as they feel anonymous (Smith & Albaum, 2005), the self-administered questionnaires were filled online.

The structural equation model (SEM) will be very well suited for this study as it will combine regression analysis with factor analysis to scrutinize the interfunctional relationships between the variables.

The stages that make up this research are presented on table 4.1 below. The research idea was the first step, the followed review of relevant literature, then generation of research questions and hypothesis. The conceptual model was then developed showing the flow of the relationships stated in the hypothesis, and then the research design. The main study covering data collection phase in which data was collected from the selected sample group, the data was then analysed by means of statistical tools and conclusions drawn from findings.

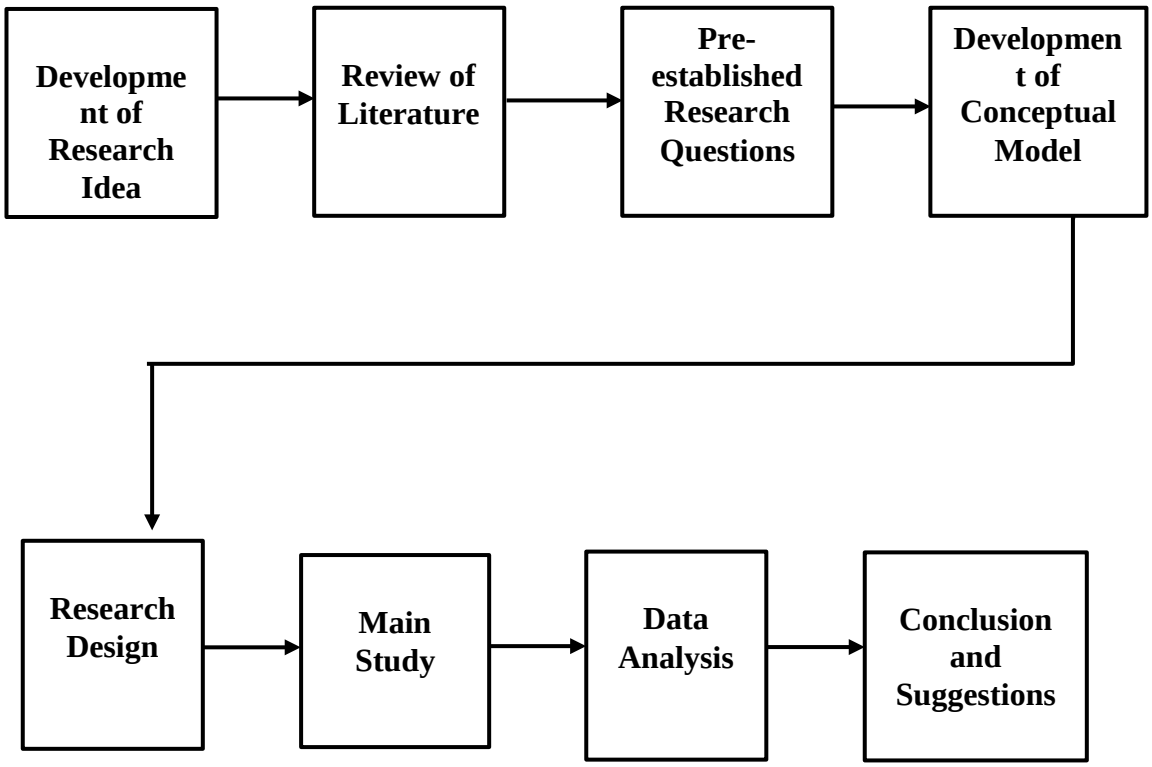


Figure 4.1: Research stages of the study

4.3 Pre-study

A pre-study was conducted to get more insights on which fashion distributors are leading the Turkish e-commerce market, and which online marketing strategies they employed to maintain their leading positions. Twenty (20) renowned distributors were selected and the pre-study phase revealed that these distributors were very keen on their online presence. They all had websites which are optimized for mobile platform, mobile applications downloadable from Playstore on Android or Appstore on Iphone, social media pages on Facebook and Instagram, as well as affiliates who advertise their products.

The pre-study focused on data from previous studies and reports that have been carried out on Turkish fashion brands. The Statista (2018) report shows the classification of customers of Turkish fashion sector according to age, income and gender as presented on table 2.1.2. Another report revealed that the leading B2C e-commerce fashion stores in Turkey are LC Waikiki, Defacto, Ipekyol, Trendyol and Morhipo.

4.3.1 Overview of the population

To attain the primary objective of this study, persons in Turkey who had patronized e-commerce platforms had to be assessed. The population of this study was therefore considered to be all active buyers/customers who had completed an online purchase transaction of any fashion item in the course of 2019. According to the Statista 2020 report, the Turkish economy recorded 33.2 million e-commerce buyers accounting for 7.897 billion USD with fashion sector alone accounting for 13.9 million users and a total revenue of 3.312 billion USD.

4.3.2 Sample and sampling procedure

A non-probability (non-random) sampling methods was adopted for this study known as the convenience sampling whereby, the sample is picked from the part of the population that is most easily accessible. Though this method comes with its own limitations, it is comparatively faster, less costly and appropriate for most of the studies in social science (Saunders et al, 2009).

Cochran’s formula was used in determining sample size as shown below;

$$n = \frac{Z^2 p(1-p)}{d^2}$$

Where,
n = acceptable minimum sample size Z = Standard normal deviation p = probability of similar studies d = acceptable margin of error

Our standard normal deviation was derived from a 95% Z score and a 5% error margin. From the Statista (2020) report, the fashion sector accounts for 13.9 million users out of the total 33.2 million e-commerce users making approximately 42%. Our minimum sample size there was calculated as follows;

$$\textbf{\textit{Sample size, n}} = \frac{1.96^2 \, x \, 0.42(1-0.42)}{0.05^2} \qquad \textbf{\textit{n = 374}} \qquad (4.1)$$

4.4 Main Study

4.4.1 Instrumentation

Testing the research model and collecting the data required for the study was facilitated by the use of self-administered questionnaires. The questions were broken down in three parts; part one had demographic questions where respondents were expected to provide information that reflects their demographic data. Part two was focused on market specific questions to obtain information on whether or not the respondent has past experience in online shopping, which fashion items they buy online, which brands they buy, which platforms they use the most, and shopping frequency. Part three of the questionnaire included questions that aim to measure the respondents' opinion about the five research variables through a 5-point likert scale. The likert scale used to measure the research items is explained as follows: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree and 5 for strongly agree, and the respondent had to pick just one on each question representing the extent to which he agrees or disagrees with a customer satisfaction related statements.

4.4.2 Collection of data

Generally, there exist two different methods of collecting data in social science studies; primary or secondary data collection. Primary data is freshly collected through questionnaire distribution while secondary data is extracted from previous studies on related subjects, journals and articles. Primary data was collected and analysed for this research to get the desired statistics.

A questionnaire was prepared and distributed to 750 randomly selected persons of both sexes within the 18 - 60 years old age range, though both online and offline mediums within 6 months. By the end of the data collection period, 618 responses had been received, yielding a response rate of 82.4%. After a preliminary data screening, some of the questionnaires were found to invalid as some fields were blank and since our study focused on e-commerce users, respondents who said they do not buy online were also removed, leaving 436 valid responses acceptable for further analysis.

4.4.3 Statistical techniques

The statistical techniques employed for this study are Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM), as well as descriptive and inferential statistics. CFA allows the researcher to test the hypothesis that a relationship between the observed variables and their underlying latent constructs exists (Suhr, 2006), and is considered as the first step of the SEM as it confirms the reliability of the data collected and the validity of the measures.

A descriptive analysis will also be used to bring out the basic characteristics of the respondents and to quantitatively determine the components of all variables. Inferential statistics on the other hand will measure reliability and validity, correlation coefficients and multiple regression analysis for hypothesis testing.

Data analysis will be carried out with the help of the IBM SPSS software which is most appropriate for analysing primary data obtained through questionnaires and able to carry out a wide range of statistical analysis (Huizingh, 2007). The SPSS analysis will process the data for further SEM analysis to be carried out in AMOS (Analysis of Moment Structure).

5. DATA ANALYSIS AND HYPOTHESIS RESULTS

5.1 Introduction

The data collected through the procedure mentioned in chapter 4 was statistically analysed using IBM SPSS version 20 and AMOS software, and the results presented in this chapter. From the 436 accepted responses, data screening was first performed to eliminate unengaged respondents, the descriptive statistics were analysed to get the individual characteristics of the respondents and summarized statistics of all variables for better comprehension of the data. Inferential statistics were then analysed by measuring the construct reliability of the questionnaire and hypothesis tested. Data analysis is the most important part of the study as it will help to whether the model and constructs scrutinized the relationships under study properly or not.

5.2 Descriptive Statistics

5.2.1 Characteristics of respondents

The sample of our study was made up of 436 respondents who were all identified as persons in Turkey who have previously bought fashion items online. This section provides background information about the respondents. Once the data was entered in the SPSS software, Data Screening was first performed and some of the respondents were removed because of unengaged responses which brought the sample size down to 421. Then a frequency test revealed the demographic data about their gender, age, education, income and number of purchases made in the last 6 months. This information is presented on table 5.1 as seen below.

From the data presented demographics table, most of the respondents are male making up 55.8% (235 respondents) while female respondents account for 44.2% (186 respondents). As for age groups, most of the respondents belong to the 25 - 34 age gap accounting for 60.8% (256 respondents), 18 – 24 age gap

representing 24.5% (103 respondents), 35 – 44 age gap representing 13.1% (55 respondents) and 45 -54 age gap covering the minimum 1.7% (7 respondents). As for educational level, Masters Students take the top position with 64.6% (272 respondents), undergraduate students covering 21.9% (92 respondents), High School students taking up 6.9% (29 respondents) and Doctorate students at the bottom with 6.7% (28 respondents). Furthermore, 57.7% (243 respondents) make a monthly income of less than 3,000TL, 33.3% (140 respondents) make between 3,000TL and 5,000TL monthly income, 5.2% (22 respondents) make between 5,000TL and 10,000TL monthly income and 3.8% (16 respondents) making above 10,000TL. The last part of the demographic data table shows number of purchase made in the last six months where 54.2% (228 respondents) said they made less than five purchases, 31.1% (131 respondents) made more than five purchases while 14.7% (62 respondents) made no purchases in the last six months.

Table 5.1: Respondents' Characteristics

Demographics	Profile	Frequency	Percentage
Gender	Male	235	55.8%
	Female	186	44.2%
Age	18 – 24	103	24.5%
	25 – 34	256	60.8%
	35 – 44	55	13.1%
	45 - 54	7	1.7%
Education	High School	29	6.9%
	Undergraduate	92	21.9%
	Masters	272	65.6%
	Doctorate	28	6.7%
Income	Less than 3000TL	243	57.7%
	3000TL – 5000TL	140	33.3%
	5000TL – 10000TL	22	5.2%
	Above 10000TL	16	3.8%
No. Of purchases	None	62	14.7%
in the last 6	Less than 5	228	54.2%
months	More than 5	131	31.1%

In the market-related section of the survey, questions were asked about the online shopping habits of the respondents in regards to which products they buy online, which brands they have bought from in the post and which platforms

they use. Responses in this section cannot be summed up to 100 as respondents were allowed to choose multiple answers. Figures 5.1, 5.2 and 5.3 below show the data collected from this section on which products they buy, which brands they have bought from and which platforms they use respectively.

Figure 5.1 below shows the fashion products available for online purchase and indicates the proportions of respondents' interest in buying each category. From the analysed data, 68.3% (288 respondents) buy cloths which is the most demanded item on the list while bags are the least demanded item with 20.6% (87 respondents).

Figure 5.2 shows some of the top selling e-commerce fashion brands and indicates which brands the respondents have previously made purchases from, with Trendyol accounting for 48.4% (204 respondents). The most listed brand in the "Others" category was Hepsiburada.

Finally, figure 5.3 shows the e-commerce platforms that respondents use. E-commerce platforms in this context refers to the channels through which individuals can order fashion products directly the seller. Based on collected data, most of the respondents prefer to order fashion products through the seller's website accounting for 63.8% (269 respondents) while 36.3% (153 respondents) order through mobile app and 28.3% (119 respondents) order from social media pages.

Figure 5.1: Fashion products respondents buy online

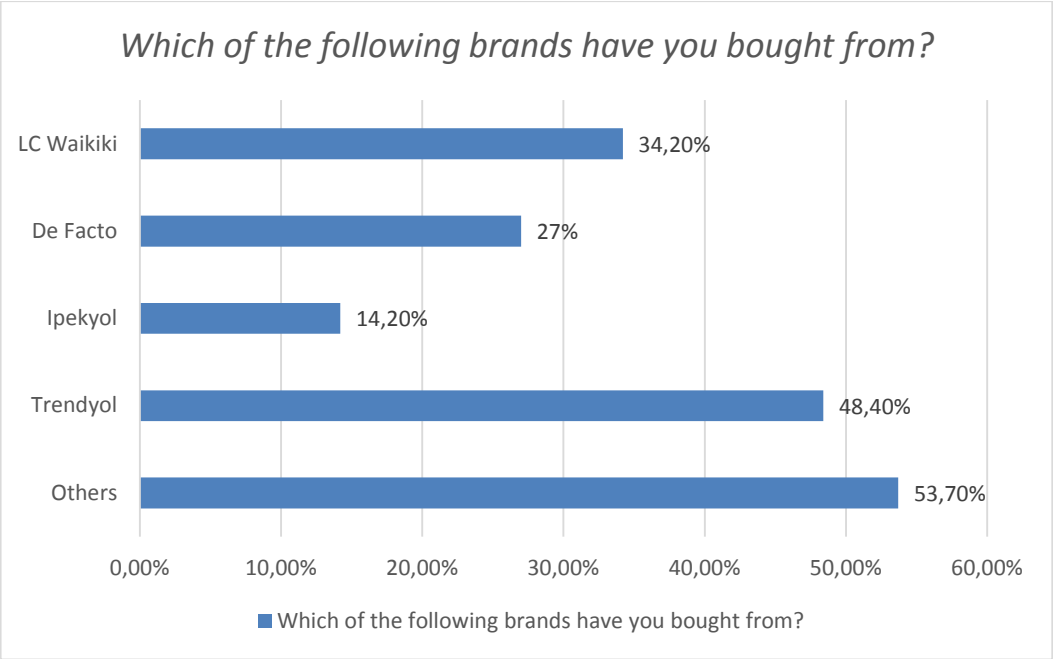


Figure 5.2: Brands which respondents have previously bought from

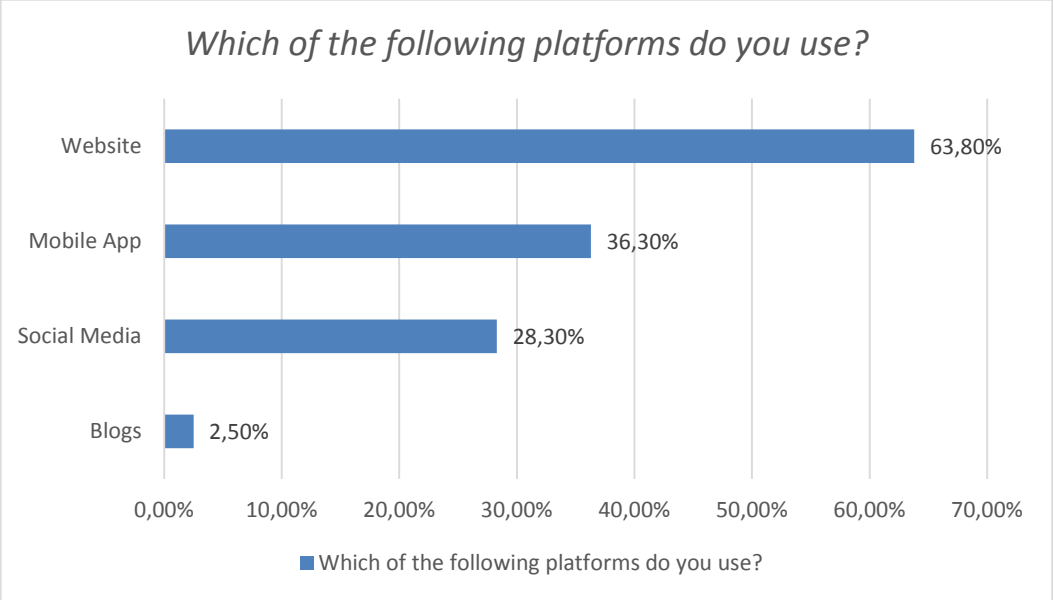


Figure 5.3: Platforms respondents use to buy fashion products

5.2.2 Descriptive statistics of variables

The study consists of 3 independent variables (Pre-purchase eCRM, At-purchase eCRM and Post-purchase eCRM), one mediating variable (Customer Satisfaction) and one dependent variable (Customer Loyalty). Data collected is

measured on a 5-point Likert Scale with 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, 5 for Strongly Agree.

Table 5.2: Presentation of Descriptive Statistics of Variables

Variables	N	Min	Max	Mean	Std. Dev.	Skew.	Kurtosis
PRE	421	1.00	5.00	3.8729	0.78278	-0.944	0.348
AT	421	1.00	5.00	3.6128	0.76440	-0.819	0.590
POST	421	1.00	5.00	2.8361	0.98551	0.087	-0.944
CS	421	1.00	5.00	3.0238	0.87867	0.097	-0.538
CL	421	1.00	5.00	3.9264	0.79165	-0.566	-0.259
Valid Sample	421						

With the mean of all 5 variables being above midpoint, the variables show a significant positive trend. The related histograms for this analysis can be found on Appendix B. Table 5.3 below shows the questionnaire and references adopted for developing eCRM dimensions, some questions were derived from a previous study while some were developed by authors. The questions were measured using the above mentioned 5-point likert scale.

Table 5.3: Descriptive Statistics of Questionnaire Items Adopted for developing eCRM Dimensions

Factors and Variables	Min	Max	Mean	St. Dev
Pre-purchase eCRM – PRE				
Display pages within the platform are easy to read	1.00	5.00	3.97	1.007
Images of products online show product features well enough	1.00	500	3.76	1.047
Product characteristics are well presented	1.00	5.00	3.83	0.914
alongside images	1.00	5.00	3.90	0.899
Web pages are visually appealing	1.00	5.00	3.96	1.054
It is easy to access variety of products when I buy online	1.00	5.00	3.81	0.997
Searching for products takes very little time				
At-purchase eCRM – AT				
Product prices are very encouraging	1.00	5.00	3.82	0.942
It is more convenient to buy online rather than going to physical stores	1.00	5.00	3.63	1.123
The variety of payment methods make it easier to buy online	1.00	5.00	3.80	1.051

Table 5.3: (con) Descriptive Statistics of Questionnaire Items Adopted for developing eCRM Dimensions

I feel safe in my transactions within the online platform	1.00	5.00	3.41	1.060
My personal information is well protected on this shopping site	1.00	5.00	3.40	0.967
Post-Purchase Ecrm – POST				
Products delivered to me are always satisfying	1.00	5.00	2.88	1.168
I am able to track the products after I place my order	1.00	5.00	2.89	1.186
It is easy to return products that do not satisfy my expectations	1.00	5.00	2.74	1.149
Customer Satisfaction – CS				
This site uses personal information to provide customized products	1.00	5.00	2.81	1.084
This site attends to customer complaints promptly	1.00	5.00	3.03	1.113
This site takes genuine interest in customer problems	1.00	5.00	3.04	1.083
The sales process is designed to satisfy the customer's needs	1.00	5.00	3.22	1.085
Customer Loyalty – CL				
I plan to continue buying fashion items online	1.00	5.00	3.77	0.895
I still prefer buying fashion items online because it is much easier	1.00	5.00	3.97	0.850

5.3 Inferential Statistics

5.3.1 Reliability and validity assessment

- **Exploratory factor analysis (EFA)**

Reliability and validity in assessment are considered the most important aspects of quantitative research as they determine the accuracy of measures used in the survey. Before carrying out empirical research, reliability and validity must be evaluated (Valli, 2010). It is therefore important to study the properties of measurement used in the study. Ronkainen et al. (2011) define validity as "the quality of the research in which data is collected in a proficient manner and the research explains the phenomenon it examines." Validity will measure the accuracy of the measurements while reliability will measure consistency. According to Messick (1989, p. 6), validity refers to the degree to which empirical evidences and theoretical rationales support the adequacy and appropriateness of interpretations and actions based on test scores. Validity tests are required for all quantitative studies in order to determine whether measures

and assessments methods are biased or not, and can be applied to other countries and cultures.

Generally, validity can be assessed in different forms; construct validity, content validity, criterion validity. This study focused on construct validity and measured convergent and discriminant validity. According to Hair et al. (2014), convergent validity indicates to what level two measures of the same variable are correlated while discriminant validity indicates to what level two conceptually similar concepts are separated.

Reliability on the other hand measures the quality of the instrument to make sure that the result is free of error (Mousa, 2019). Also, Smith & Albaum (2005) state that "reliability examines how consistent the measured item is among respondents and the steadiness of characteristics across time period." There is more than one way to measure reliability in data analysis but for the purpose of this study, composite reliability will be used to measure the internal consistency in scale items under survey. In order to properly and successfully assess validity and reliability, Hair et al. (2010), Gefen & Straub (2005) proposed the following measurement threshold;

Reliability

- Composite Reliability, CR > 0.70

Convergent Validity

- Average Variance Extracted, AVE > 0.50

Discriminant Validity

- Maximum Shared Variance, MSV < AVE
- Square Root of AVE > inter construct correlations

In order to measure these validity components, an exploratory factor analysis (EFA) was first performed and a pattern matrix was extracted.

After carrying out the exploratory factor analysis on 20 items (representing 20 questions from our survey), the following preliminary results were obtained as presented on table 5.4 (KMO and Bartlett's Test), 5.5 (Total Variances Explained) and 5.6 (Communalities) below;

- A 5-factor solution representing the 3 independent variables, 1 mediating variable and 1 dependent variable
- A KMO value of 0.821
- Chi square = 3493.800 and df = 153)
- All factor loading values are > 0.3
- Two (2) items were deleted because of cross-loading and correction possibility
- The total variance recorded was 58.425%
- Communalities range from 0.355 – 0.999
- Non-redundant residuals = 11.

Sig. of .000 means that variables are related enough to proceed with the analysis as the required level is for the value to be less than 0.05 (< 0.05).

Table 5.4: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Var.	Cum. %	Total	% of Var	Cum.%	Total
1	5.248	29.154	29.154	2.250	12.498	12.498	4.439
2	3.283	18.238	47.392	4.776	26.536	39.034	3.507
3	1.576	8.757	56.149	1.445	8.030	47.065	2.599
4	1.292	7.175	63.324	1.142	6.342	53.407	2.265
5	.927	5.152	68.475	.903	5.018	58.425	1.551
6	.807	4.486	72.961				
7	.715	3.971	76.932				
8	.686	3.810	80.742				
9	.520	2.888	83.630				
10	.468	2.602	86.233				
11	.414	2.299	88.532				
12	.384	2.133	90.666				
13	.358	1.991	92.656				
14	.333	1.850	94.506				
15	.303	1.684	96.190				
16	.254	1.410	97.599				
17	.229	1.273	98.872				
18	.203	1.128	100.00				

Table 5.5: Communalities

	Initial	Extraction
PRE 1	.499	.495
PRE 2	.580	.561
PRE 3	.546	.575
PRE 4	.555	.555
PRE 5	.638	.666
PRE 6	.565	.572
AT 1	.397	.355
AT 2	.400	.370
AT 3	.548	.612
AT 4	.494	.571
AT 5	.458	.526
POST 1	.550	.613
POST 2	.643	.807
POST 3	.440	.388
CS 2	.617	.999
CS 3	.610	.609
CL 1	.380	.763
CL 2	.387	.477

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Tables 5.7 below show the pattern matrix obtained from EFA. The pattern matrix is a diagram showing the standard loadings of variables under study as well correlations among factors obtained in the EFA of ordinal data. The Cronbach's Alpha statistics for all five factors are included at the bottom of the table, all the coefficients are strong and above 0.70 ($\alpha > 0.70$) which the generally accepted threshold. Cronbach's Alpha coefficient is used to measure reliability of all variables in the study. The observed coefficients range from 0.733 to 0.881 and shows a high internal consistency for all measured variables. Factor 1 represents Pre-purchase eCRM, 2 represents At-purchase eCRM, 3 represents Post-purchase eCRM, 4 represents Customer Satisfaction and 5 represents Customer Loyalty.

Table 5.6: Pattern Matrix from EFA

	Factors				
Items	1	2	3	4	5
PRE 1	0.698				
PRE 2	0.634				
PRE 3	0.841				
PRE 4	0.693				
PRE 5	0.833				
PRE 6	0.778				
AT 1		0.402			
AT 2		0.418			
AT 3		0.697			
AT 4		0.793			
AT 5		0.771			
POST 1			0.836		
POST 2			0.876		
POST 3			0.561		
CS 2				1.004	
CS 3				0.588	
CL1					0.890
CL 2					0.655
Cronbach Alpha (α)	0.881	0.795	0.798	0.846	0.733

- **Confirmatory factor analysis (CFA)**

The pattern matrix obtained from the EFA was then used to carry out a CFA. In step one of the CFA, a structural model was developed using the pattern matrix in Table 5.7 and analysed to obtain fitness coefficients of the variables under study. The model was hypothesized based on the literature review. Some changes were made to the original model according to proposed modification indices in order to achieve the best fitness indices.

Hooper et al. (2008) proposes three types of model fit indices considered by researchers:

Absolute fit indices (CMIN/DF, RMSEA, SRMR, GFI and AGFI)

Incremental fit indices (CFI and NFI)

Parsimony fit indices (PGFI and PNFI; AIC and CAIC)

For this study, the following indices were reported;

- The CMIN/DF is the value of chi-squared mean and is used to reduce the level of sensitivity between the sample size and chi-square. According to

Hooper et al. (2008), a good fit for CMIN/DF should have an observed not less than 1 and not more than 3 ($3 \geq \text{value} \geq 1$).

- RMSEA: This fit index is used to assess the level of perfection of a hypothesized model. RMSEA is considered a Good Fit if the observed coefficient is less than 0.08 (Hair et al., 2010).
- SRMR measures the difference between observed and hypothesized correlation matrices (Amanzhanova, 2018). A good fit for SRMR will be an observed coefficient of RMR < 0.06 (Hair et al., 2010).
- GFI and AGFI: These two indices are used to calculate the degree of nonconformity of the hypothesized model. The AGFI is adjusted in respect to the degrees of freedom and both indices will be considered good fits if the observed coefficients are close to 1 (Byrne, 2010). According to Hair et al. (2010), GFI and AGFI coefficients are both expected to be above 0.90 (GFI > 0.90 and AGFI > 0.90).
- CFI presumes that all latent variables are not correlated and contrasts hypothesized model with null model (Hooper, Coughlan & Mullen, 2008). CFI will be considered a good fit if the observed coefficient is above 0.95 (Hooper et al., 2008) but will still be acceptable if the observed coefficient is above 0.90 (Hair et al., 2010).
- PNFI is a modification of NFI (James et al., 1982) calculated with respect to the parsimony ratio of degrees of freedom.
- TLI which is a fit index also known as the NNFI is not significantly affected by the sample size (Ding et al., 1995). A good fit for TLI is an observed coefficient of less than 0.90

In order to obtain the above mentioned fitness indices in their appropriate thresholds, the following changes were made to the original model based on proposed modification indices;

1. Some items with the lowest loading were removed from the model, as well as an item that had no covariance with other items but had very high covariance with the variables. It is possible to eliminate some items from the model in order to achieve the perfect fit indices; however, each factor must

have at least two items so that it can be included in the CFA otherwise the factor itself must be removed (Kline, 2011)

2. Covariations were made between items that had very high covariance. Covariance in model modification is only possible between two items if both items fall under the same variable.

Table 5.7: Model Fit Indices from CFA

Indices	Observed	Threshold	Result
CMIN/DF	2.718	< 5	Good Fit
Comparative Fit Index (CFI)	0.956	> 0.90	Good Fit
Goodness-of-Fit Index (GFI)	0.947	> 0.90	Good Fit
Adjusted Goodness-of-Fit Index (AGFI)	0.912	> 0.90	Good Fit
Tucker-Lewis Index (TLI)	0.936	> 0.90	Good Fit
Standardized Root Mean Square Residual (SRMR)	0.048	< 0.06	Good Fit
Root Mean Square Error of Approximation (RMSEA)	0.064	< 0.08	Good Fit
Parsimony Normed Fit Index (PNFI)	0.646	> 0.50	Good Fit
PCLOSE	0.021	> 0.05	Acceptable

According to the results of CFA shown Table 5.8 above, CMIN/DF is a good fit observed at 2.718. GFI value is 0.947 and AGFI value is 0.912 which are both above the 0.90 minimum threshold and considered good fits. The CFI value is observed at 0.956 which is above the required minimum of 0.90 and considered a good fit. The TLI is recorded at 0.936 which is also above the minimum threshold of 0.90 and considered a good fit. The PNFI is observed at 0.646 and considered a good fit because it exceeds the required minimum of 0.50.

In summary, the fitness results confirmed good fit exhibit of the measurement model as all fitness indices fall within the required range proposed by Awang (2012) and Hair et al. (2010).

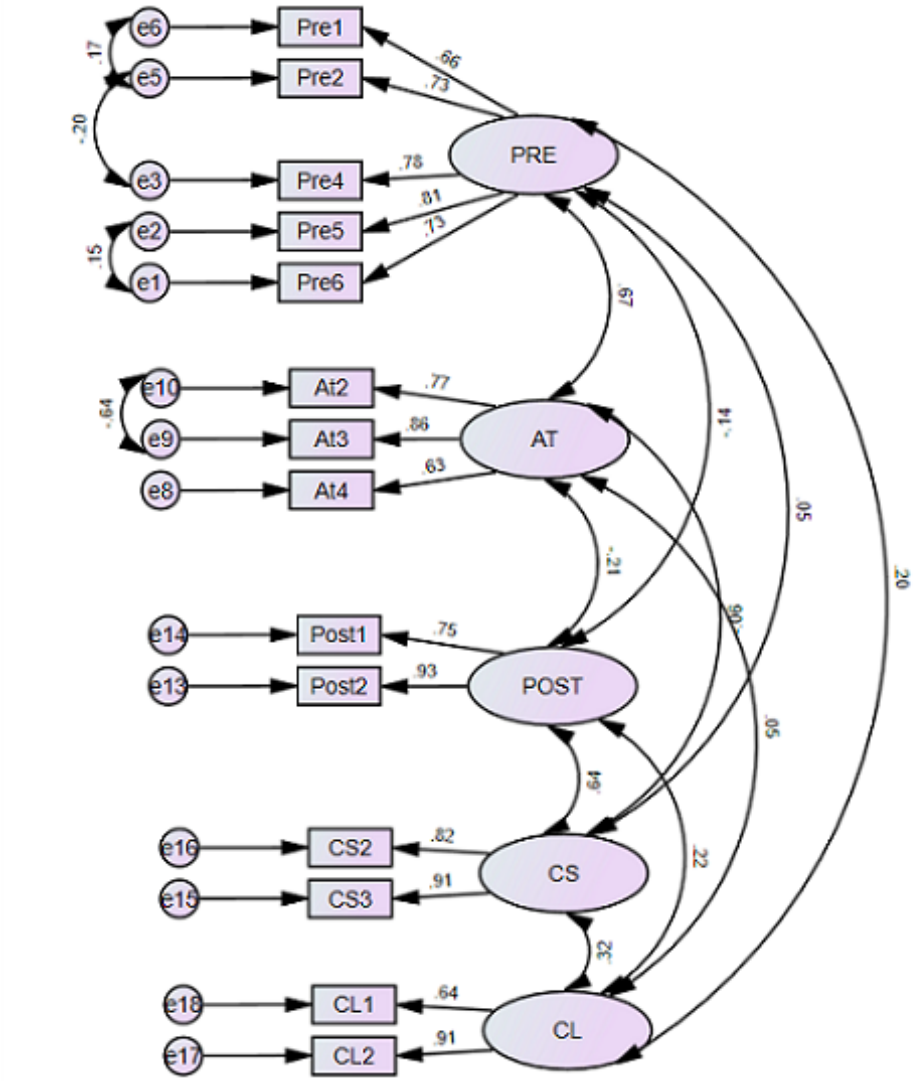

Figure 5.4: CFA Model

After removing some items (Pre3, At1, At5 and Post3) and covariating items with the highest covariance (Pre1-Pre2, Pre2-Pre4, Pre5-Pre6, and At2-At3), the appropriate CFA model as shown in Figure 5.4 was attained. The number of distinct sample moments for this model was 105, chi-squared was 171.249 and degrees of freedom was 63. Though the CFA is a multivariate statistical procedure that can test the consistency of measurements used in a construct, it also verifies the factor structure of the group of observed variables and also the regression paths connecting each variable with the other.

The Factor Loadings on table 5.8 shows how the observed and latent factors are interrelated. It shows significant interactions between the observed factors and latent factors as all values of P are less than 0.001 (*** refers $P < 0.001$) and the

estimates show that an increase in the latent variable by 1 will increase the observed factor by an estimated number. Also, there are corresponding values of standard error (S.E.) for each factor.

Table 5.8: Factor Loading (Regression Weights)

			Estimate	S.E.	C.R.	P Label
Pre6	<---	PRE	1.000			
Pre5	<---	PRE	1.149	.068	16.925	***
Pre4	<---	PRE	.953	.070	13.710	***
Pre2	<---	PRE	1.061	.084	12.671	***
Pre1	<---	PRE	.899	.075	12.024	***
At4	<---	AT	.755	.084	8.994	***
At3	<---	AT	1.059	.088	11.991	***
At2	<---	AT	1.000			
Post2	<---	POST	1.272	.097	13.106	***
Post1	<---	POST	1.000			
CS3	<---	CS	1.000			
CS2	<---	CS	.924	.061	15.212	***
CL2	<---	CL	1.000			
CL1	<---	CL	.742	.132	5.619	***

To better assess the relative power of the observed factors and better explain the latent variables, standardized regression weights were obtained to aid in reliability and validity assessment. The estimates on the standardized regression weight table as seen on table 5.9 show a strong contribution and range from 0.625 to 0.928.

Table 5.9: Standardized Regression Weights

			Estimate
Pre6	<---	PRE	.732
Pre5	<---	PRE	.809
Pre4	<---	PRE	.775
Pre2	<---	PRE	.734
Pre1	<---	PRE	.658
At4	<---	AT	.625
At3	<---	AT	.864
At2	<---	AT	.770

Table 5.9: (con) Standardized Regression Weights

			Estimate
Post2	<---	POST	.928
Post1	<---	POST	.748
CS3	<---	CS	.906
CS2	<---	CS	.816
CL2	<---	CL	.905
CL1	<---	CL	.640

Using the correlations and standard regression weights table obtained from SPSS AMOS analysis, the validity and reliability assessment was carried out. Based on the results shown on table 5.11, reliability has been established as all composite reliability (CR) coefficients are observed above the required minimum (CR > 0.70).

Table 5.10: Reliability and Validity table from CFA

	CR	AVE	MSV	MaxR(H)	CS	PRE	AT	POST	CL
CS	.852	.743	.410	.868	.862				
PRE	.860	.553	.449	.866	.047	.743			
AT	.801	.577	.449	.834	-.064	.670	.759		
POST	.829	.710	.410	.882	.640	-.144	-.209	.843	
CL	.756	.614	.101	.839	.318	.198	.047	.220	.784

Convergent validity is established since observed values of AVE fall above the minimum threshold of 0.50 (AVE > 0.50). All observed values of MSV are less than the observed coefficients of AVE and the square root of all AVE values are greater than the inter-construct correlations. It is therefore evident that discriminant validity is established and verified. In conclusion, the collected data is considered reliable and valid as it shows positive results in the reliability and validity assessment.

5.3.2 Normality of variables

Normality assessment in this study was carried out by verifying the level of skewness and kurtosis of the variables under study. Skewness measures the asymmetry of data distribution around the mean. According to Klein (2011), positive skew is when a big portion of the scores are lower than the mean, negative skew is when a big portion of the scores are above the mean with respect to the normal curve. Klein (2011) also indicates that if the skewness result is greater than, it shows an extremely positive skew and if the result is less than -3, it shows an extremely negative skew. This implies that, the appropriate skewness index (SI) for a normal distribution should fall between 3 and -3 (3 > SI > -3). Figure 5.5 below shows a perfect example of skewness.

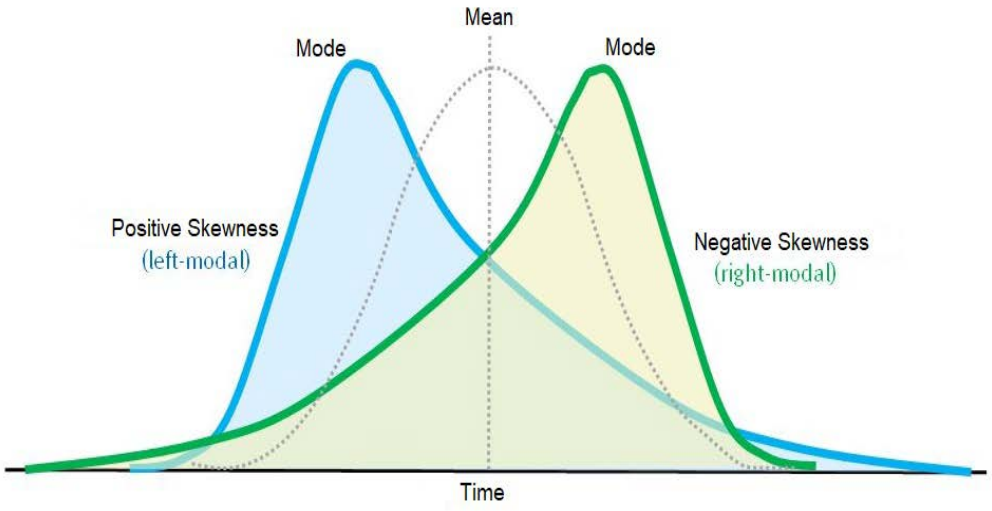

Figure 5.5: Example of positive and negative skew

Kurtosis index (KI) indicates if the data is heavy-tailed and has higher peak (positive kurtosis) or if the data is light-tailed and has lower peak (negative kurtosis) comparing to a normal distribution (Amanzhanova, 2018). Positive kurtosis can also be referred to as leptokurtic while negative kurtosis are referred to as platykurtic. According to Klein (2011), observed kurtosis results that are greater than 8 indicate an extremely positive kurtosis while results below -8 will indicate extremely negative kurtosis. A normal distribution therefore is expected to have kurtosis indices that fall within the maximum of 8 and a minimum of -8 (8 > KI > -8). An example of positive and negative kurtosis is seen below.

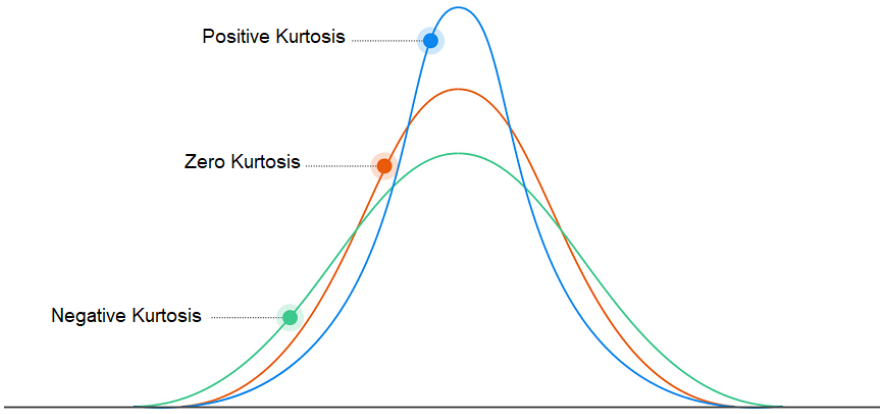

Figure 5.6: Example of positive and negative kurtosis

The normality assessment in this study was carried out with SPSS AMOS software and the results depicted on table 5.11 below can be interpreted as follows;

Table 5.11: Rescaled Standardized Kurtosis Index and Skew Index

Variable	min	max	skew	c.r.	kurtosis	c.r.
CL1	1.000	5.000	-.449	-3.737	-.203	-.844
CL2	1.000	6.000	-.363	-3.024	-.460	-1.916
CS2	1.000	5.000	.010	.084	-.768	-3.197
CS3	1.000	5.000	-.057	-.476	-.633	-2.636
Post1	1.000	5.000	-.039	-.326	-.999	-4.159
Post2	1.000	5.000	.084	.702	-1.059	-4.410
At2	1.000	5.000	-.708	-5.893	-.142	-.592
At3	1.000	5.000	-.718	-5.975	-.122	-.510
At4	1.000	5.000	-.541	-4.505	-.165	-.688
Pre1	1.000	5.000	-.859	-7.149	.290	1.207
Pre2	1.000	5.000	-.752	-6.263	-.104	-.433
Pre4	1.000	5.000	-.481	-4.009	-.312	-1.298
Pre5	1.000	5.000	-.920	-7.658	.036	.150
Pre6	1.000	5.000	-.653	-5.433	-.212	-.885
Multivariate					18.344	8.838

- The skewness indices of the distribution range from -0.920 to 0.084 which all fall within the normality scale of 3 > SI > -3
- The kurtosis indices of the distribution range from -1.059 to 0.290 which all fall within the normality scale of 8 > KI > -8

Since the skewness and kurtosis indices all fall within their respective normality scales, it is safe to conclude that normality is verified and the data set is considered as normally distributed. The data set therefore is appropriate for further SEM analysis. Table 5.11 includes normality assessment conducted through AMOS software. Obtained results meet normality criteria set above.

5.4 Structural Equation Modeling (SEM)

Structural Equation Modeling provides a very general and convenient framework for statistical analysis that include several traditional multivariate procedures, for example factor analysis, regression analysis, discriminant analysis, and canonical correlations, as special cases (Hox & Bechger, 2011). Before the SEM analysis can be performed, linearity of relationships and multi-collinearity of variables must first be tested. The assumptions for SEM testing require that variables have linear distribution and that they do not correlate among themselves. This is to ensure that each independent variable in the study is testing something different and no two independent variables are measuring the same thing.

5.4.1 Linearity assessment

The linearity test is conducted on all possible relationships that exist on the model of the study to determine whether the relationships between the variables are linear enough. Relationships that turn out to be non-linear will be considered as limitations we will have to deal with. The linearity test was conducted through curve estimation using the SPSS software and the observed results are seen on table 5.12 below. Four (H3a, H1b, H3b and H4) out of the seven relationships hypothesized are linear (with Sig. = 0.000) while the other three (H1a, H2a and H2b) were more cubic than linear. Results of the curve estimation analysis can therefore be concluded that the relationships were sufficiently linear to be tested using a covariance-based structural equation

modelling algorithm like SPSS AMOS. According to Hox & Bechger (2011), structural equation models do not necessarily have to be linear nowadays, because the possibilities of SEM extend well beyond the original Lisrel program used by Joreskog.

Table 5.12: Linearity Results from Curve Estimation

Hypo	Relationship (DV <--- IV)	Equation	Sig.
H1a	Customer Satisfaction <--- Pre-purchase eCRM	Cubic	0.003
H2a	Customer Satisfaction <--- At-purchase eCRM	Cubic	0.007
H3a	Customer Satisfaction <--- Post-purchase eCRM	Linear	0.000
H1b	Customer Loyalty <--- Pre-purchase eCRM	Linear	0.000
H2b	Customer Loyalty <--- At-purchase eCRM	Cubic	0.131
H3b	Customer Loyalty <--- Post-purchase eCRM	Linear	0.000
H4	Customer Loyalty <--- Customer Satisfaction	Linear	0.000

5.4.2 Multi-collinearity assessment

In order to successfully carry out the multiple regression analysis, collinearity assessment was first carried out to measure the level of correlation between the independent variables of the study. The existence of multivariate collinearity indicates that different independent variables are measuring the same thing and this is not a good indicator for our study. There are three independent variables (Pre-Purchase eCRM, At-purchase eCRM and Post-purchase eCRM) to be measured and each one was used as the dependent variable to measure its level of correlation with the other two. If the observed tolerance is less than 0.1, it is an indication of the existence of multivariate collinearity. The Variance Inflation Factor (VIF) coefficient is also required to be below 10. This implies that if the observed VIF is greater than 10, it is a strong indicator of multivariate collinearity. The VIF and Tolerance were calculated for independent variables separately by running a collinearity regression analysis using the SPSS software and the following results were obtained;

Dependent Variable: Pre-purchase eCRM

Table 5.13: Collinearity Assessment 1

	Collinearity Statistics	
Model	Tolerance	VIF
Total At-purchase	1.000	1.000
Total Post-purchase	0.966	1.035

Dependent Variable: At-purchase eCRM

Table 5.14: Collinearity Assessment 2

	Collinearity Statistics	
Model	Tolerance	VIF
Total Pre-purchase	0.986	1.015
Total Post-purchase	0.986	1.015

Dependent Variable: Post-purchase eCRM

Table 5.15: Collinearity Assessment 3

	Collinearity Statistics	
Model	Tolerance	VIF
Total Pre-purchase	0.670	1.492
Total At-purchase	1.000	1.000

Based on the observed results of the collinearity assessment, all Tolerance values are above 0.1 ($0.670 \leq$ Tolerance ≤ 1.000) and all observed VIF values are less than 10 ($1.000 \leq$ VIF ≤ 1.492). It is therefore safe to conclude that there is no indication of the existence of multivariate collinearity, making it possible for further SEM analysis can be carried out using the SPSS software.

5.4.3 Multiple linear regression analysis

Through the multiple linear regression analysis, the three independent variables were measured first against customer satisfaction as a dependent variable and then measured against customer loyalty to obtain the standardized and unstandardized coefficients of the model under study. This test requires the assumptions of sample size, normality of the dependent variable, absence of

outliers in all variables, a sufficiently linear relationship among variables and the absence of multi-collinearity.

In the first multiple regression analysis, Customer Satisfaction is used as the dependent variable to analyse the relationships between the three eCRM features (independent variables). In addition to the results shown in table 5.16 below, the Standard Residuals (SR) range from -2.714 to 2.718 (-3 < SR < 3) and Cook's distance ranges from 0.000 to 0.037 (0.000 < Cook's < 1). Pre-purchase and Post-purchase eCRM show significant contribution to change in Customer Satisfaction while At-purchase eCRM does not predict movement in Customer Satisfaction because it is insignificant (Sig > 0.05) and its Beta weights are both negative (standardized and unstandardized).

Dependent Variable: Customer Satisfaction

Table 5.16: Multiple Linear Regression Analysis 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.947	.268		3.532	.000
PRE	.195	.065	.152	3.013	.003
AT	-.045	.060	-.039	-.759	.448
POST	.513	.040	.541	12.895	.000

The second multiple linear regression analysis placed Customer Loyalty as the dependent variable against the three independent variables and results presented in table 5.17 below. The Standard Residuals are slightly below the minimum threshold and range from -3.079 to 2.007 while Cook's distance ranges properly from 0.000 to 0.032. All three independent variables made a significant contribution to Customer Loyalty as levels significance were within acceptable range (Sig. < 0.05) though At-purchase eCRM had a lesser impact as seen on its negative Beta weights.

2. Dependent Variable: Customer Loyalty

Table 5.17: Multiple Linear Regression Analysis 2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.048	.234		13.007	.000
PRE	.203	.057	.209	3.592	.000
AT	-.104	.052	-.117	-1.987	.048
POST	.139	.035	.194	4.012	.000

5.4.4 SEM Hypothesis Testing

Structural Equation Modelling (SEM) is a methodology for representing, estimating and testing a network of relationships between measured variables and latent constructs (Suhr, 2006). Testing the hypothesis represented on the model of the study was done by first of all bringing out the structural equation model and then running an analysis of the model through the SPSS AMOS software. SEM concentrates on analysing and evaluating relationships between hypothesized latent variables (Amanzhanova, 2018), and statistically explaining the interrelationships existing between the observed variables and latent variables.

After building the structural equation model, the hypothesis was tested by running the global and local tests proposed by Gaskin (2016) in its three stages as seen in figure 5.7 below; first of all, model fitness indices were obtained from the SEM, then the r-squared values and lastly the p-values were extracted.

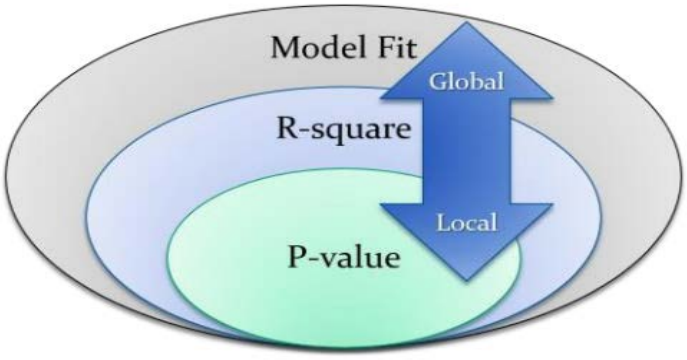

Figure 5.7: Global and Local Tests Proposed by Gaskin (2016)

The SEM as depicted in figure 5.8 below shows the interrelations between observed variables and latent variables as well as several regression equations. The relationships shown in the model are both direct and indirect, with the indirect relationships stemming from eCRM features through customer satisfaction to get to customer loyalty. The SEM is a statistically safe reconstruction of the CFA model and comes with some unobserved variables attached to the dependent variable and the mediating variable. It shows distinctly the direction of relationships between the variables that will be measured by testing the corresponding hypothesis.

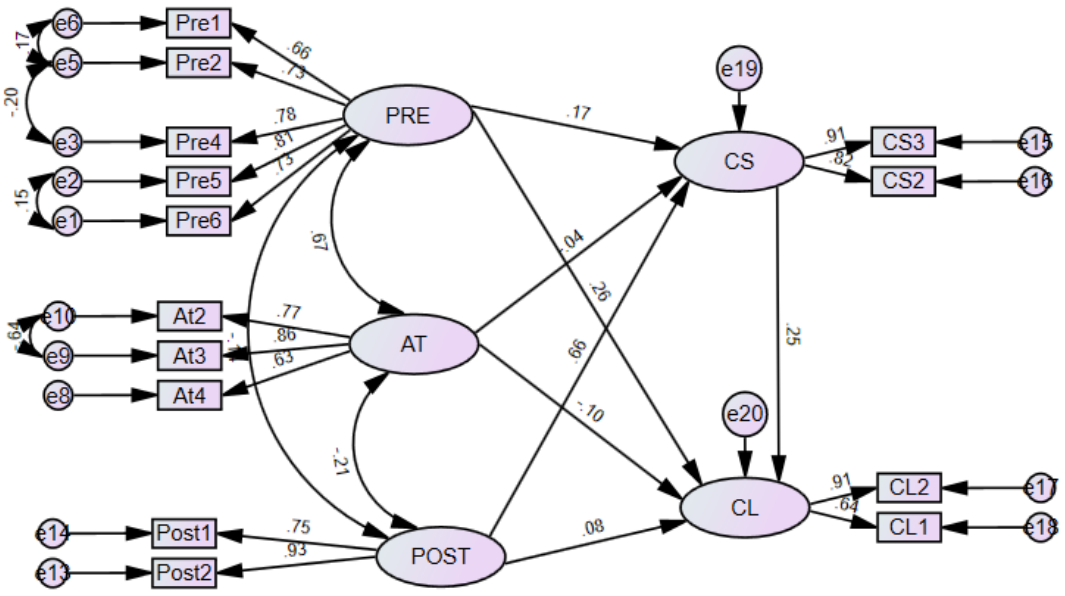

Figure 5.8: Structural Equation Model

The SEM in figure 5.8 was analysed by running it in the SPSS AMOS software to extract its model fitness indices. The model fitness results show that the fitness indices derived running the SEM are the same as the model fit results obtained from the CFA analysis as seen in table 5.18 below. Since all fitness indices fall within the required range of fitness, it if safe to conclude that the fitness criteria is fulfilled and we can proceed to the next step which is the evaluation of r-square results.

Table 5.18: Model Fit Indices from Structural Equation Model

Indices	Observed	Threshold	Result
CMIN/DF	2.718	< 5	Good Fit
CFI	0.956	> 0.90	Good Fit
GFI	0.947	> 0.90	Good Fit
AGFI	0.912	> 0.90	Good Fit
TLI	0.936	> 0.90	Good Fit
SRMR	0.048	< 0.06	Good Fit
RMSEA	0.064	< 0.08	Good Fit
PNFI	0.646	> 0.50	Good Fit
PCLOSE	0.021	> 0.05	Acceptable

The r-square (also known as the Squared Multiple Correlation, SMC) shows the percentage of variance reflected by the variable contributors of the question, usually between 0% and 100% and the higher the value the better the sample data matches the model (Byrne, 2010). From the analyses on SPSS AMOS software, observed R-Square value for Customer Satisfaction is 0.430 (43%) and that of Customer Loyalty is 0.144 (14.4%) which both fall within the acceptable threshold range proposed by Byrne (2011). In conclusion therefore, 43% of the variation in Customer Satisfaction is predicted by eCRM features while only 14.4% of variation in Customer Loyalty is predicted by eCRM features, which justifies the direct relationships between the IVs and the DV.

Next, p-values of the direct relationships were examined with respect to the stated hypothesis and conclusions of hypothesis tests were drawn. In order for a hypothesis to be accepted, p-value are required be below 0.05 (p-value < 0.05). If the p-value is above 0.05, then the hypothesis will be rejected. It is important to note that, this procedure only tests the direct relationship between various variable and does not measure the mediating or moderating effect that exists between these variables.

Table 5.19: Extracted P-values for Direct Relationship Analysis

			Estimate	S.E.	C.R.	P Label
CS	<---	PRE	.225	.093	2.421	.015
CS	<---	POST	.742	.065	11.484	***
CS	<---	AT	-.043	.077	-.557	.578
CL	<---	PRE	.279	.088	3.181	.001
CL	<---	AT	-.087	.071	-1.225	.221
CL	<---	POST	.069	.071	.975	.330
CL	<---	CS	.196	.063	3.109	.002

Note that *** refers to P < 0.05

The observed p-values as reported on table 5.19 show that 4 of the relationships are accepted because all values of $P < 0.05$ while the remaining 3 are rejected because the values of $P > 0.05$.

In order to test the mediating effect of customer satisfaction in the relationship between eCRM implementation and customer loyalty, the SPSS AMOS software was once again employed. The results obtained from running direct and indirect effects analysis in the SPSS AMOS software as presented on table 5.20 show the upper and lower bounds of the indirect relationship between eCRM implementation and customer loyalty, mediated by customer satisfaction.

Table 5.20: Indirect Relationship Analysis

	Estimate	Lower	Upper	P-value
PRE ---> CS ---> CL	0.044	0.013	0.090	0.014
AT ---> CS ---> CL	-0.008	-0.046	0.013	0.502
POST ---> CS ---> CL	0.146	0.071	0.239	0.004

5.4.5 Hypothesis testing results

Based on the global and local tests conducted, the hypothesis testing results are reported on table 5.21 below. First of all, the direct relationships between the variables as seen on the SEM model on figure 5.8 will be evaluated. In analysing the significance of the direct relationship between eCRM and Customer Satisfaction, the dimension of hypothesis was divided into three parts as follow;

- Pre-purchase eCRM has a significant effect on customer satisfaction
- At-purchase eCRM has a significant effect on customer satisfaction
- Post-purchase eCRM has a significant effect on customer satisfaction

Also, the significance of the direct relationship between eCRM and Customer Loyalty looked at three parts of hypothesis dimensions as follows;

- Pre-purchase eCRM has a significant effect on customer loyalty
- At-purchase eCRM has a significant effect on customer loyalty
- Post-purchase eCRM has a significant effect on customer loyalty

Lastly, the significance of the direct relationship between the mediating variable customer satisfaction and the dependent variable customer loyalty was analysed as;

- Online customer satisfaction has a significant effect on customer loyalty

Table 5.21: Hypothesis Testing Results of Direct Effects

Hypothesis	Relationship	P	Status
H1a	CS <--- POST	0.015	Supported
H2a	CS <--- AT	0.578	Not Supported
H3a	CS <--- POST	***	Supported
H1b	CL <--- PRE	0.001	Supported
H2b	CL <--- AT	0.221	Not Supported
H3b	CL <--- POST	0.330	Not Supported
H4	CL <--- CS	0.002	Supported

Note that *** refers to P<0.05

- **Summary of Hypothesis test results**

H1a. Effective Implementation of pre-purchase eCRM features has a significant effect on online customer satisfaction (**Supported**).

H2a. Effective Implementation of at-purchase eCRM features has a significant effect on online customer satisfaction (**Not Supported**).

H3a. Effective Implementation of post-purchase eCRM features has a significant effect on online customer satisfaction (**Supported**).

H1b. Effective Implementation of pre-purchase eCRM features has a significant effect on online customer loyalty (**Supported**).

H2b. Effective Implementation of at-purchase eCRM features has a significant effect on online customer loyalty (**Not Supported**).

H3b. Effective Implementation of post-purchase eCRM features has a significant effect on online customer loyalty (**Not Supported**).

H4. Online customer satisfaction has a significant effect on customer loyalty (**Supported**).

The indirect relationships between the three eCRM features (pre-purchase, at-purchase and post-purchase eCRM) and the dependent variable (Customer

Loyalty) as mediated by customer satisfaction were also analysed and the following results concluded;

Table 5.22: Hypothesis Testing Results of Indirect Relationships

	Relationship	P	Status
1	PRE ---> CS ---> CL	0.014	Supported
2	AT ---> CS ---> CL	0.502	Not Supported
3	POST ---> CS ---> CL	0.004	Supported

H4a. Customer Satisfaction has a significant mediation effect on the relationship between pre-purchase eCRM and customer loyalty (**Supported**).

H4b. Customer Satisfaction has a significant mediation effect on the relationship between at-purchase eCRM and customer loyalty (**Not Supported**).

H4c. Customer Satisfaction has a significant mediation effect on the relationship between post-purchase eCRM and customer loyalty (**Supported**).

6. DISCUSSION AND CONCLUSION

6.1 Discussion of Findings

The primary objective of this study was to scrutinize the relationship that exists between eCRM implementation and Customer Satisfaction and Loyalty in the Turkish Fashion sector. After reviewing the related literature, seven hypotheses were developed in respect to the variables under study and self-administered questionnaires were used to collect data.

The respondents' background information as seen on table 5.1 revealed the following;

- The majority of customers were male.
- The greatest number of customers belongs in the 25 – 34 years age gap.
- Most respondents are university students at the Masters' level.
- Majority of respondents had less than 3000TL of monthly income.
- More than half of respondents had made between 1-5 purchases in the last 6 months.

As the analysis proceeded, the multiple linear regression analysis revealed the significance of the direct relationship existing between the variables in respect to proposed hypothesis. This analysis showed that 4 out of the seven direct relationships were supported and thus the hypothesis accepted. The basis for acceptance and rejection was the multiple linear regression analysis in which all relationships with significant P-values ($P < 0.05$) were supported and hypothesis was accepted while the relationships with insignificant P-values ($P > 0.05$) were not supported and thus, hypothesis was rejected.

- The relationship between pre-purchase eCRM and customer satisfaction was significant and supported (H1a was accepted)

- The relationship between at-purchase eCRM and customer satisfaction was insignificant and not supported (H2a was rejected)
- The relationship between post-purchase eCRM and customer satisfaction was significant and supported (H3a was accepted)
- The relationship between pre-purchase eCRM and customer loyalty was significant and supported (H1b was accepted)
- The relationship between at-purchase eCRM and customer loyalty was insignificant and not supported (H2b was rejected)
- The relationship between post-purchase eCRM and customer loyalty was insignificant and not supported (H3b was accepted)
- The relationship between online customer satisfaction and customer loyalty was significant and supported (H4 was accepted)

The indirect relationships between the eCRM features and customer loyalty mediated by customer satisfaction were then tested in SPSS AMOS. The results were obtained by bootstrapping the lower bounds and upper bounds of the indirect effect and the significance measured by observed P-values. Though these relationships were not hypothesised, we report the findings as follows;

- The indirect relationship between pre-purchase eCRM and customer loyalty mediated by customer satisfaction was significant and supported (H4a was accepted).
- The indirect relationship between at-purchase eCRM and customer loyalty mediated by customer satisfaction was insignificant and not supported (H4b was rejected).
- The indirect relationship between post-purchase eCRM and customer loyalty mediated by customer satisfaction was significant and supported (H4c was accepted).

6.1.1 Pre-purchase eCRM as an independent variable

In respect to the findings from data analysis, it is safe to conclude that pre-purchase eCRM has a full effect on customer loyalty since the effect is

significant with or without the mediating variable. Pre-purchase eCRM as an independent variable therefore, makes a significant contribution to change in the level of customer satisfaction and loyalty.

The pre-purchase eCRM features that were analysed in this study include the following components; website design, search capabilities, customer education and site customization. Since all effects of pre-purchase eCRM on customer satisfaction are significant, it is therefore safe to conclude that these components are essential in developing eCRM strategies for e-commerce distributors in the Turkish Fashion sector.

6.1.2 At-purchase eCRM as an independent variable

The results of the analysis on the relationships between at-purchase eCRM and customer satisfaction and loyalty turned out to be an insignificant relationship as the direct effects on both customer satisfaction and customer loyalty were insignificant, leading to an insignificant indirect effect between at-purchase eCRM and customer loyalty as well. It is therefore safe to conclude that at-purchase eCRM does not predict movement in customer satisfaction and loyalty as it makes no significant contribution.

6.1.3 Post-purchase eCRM as an independent variable

Looking at post-purchase eCRM on the other hand, results of data analysis support the significance of the direct relationship between post-purchase eCRM and customer satisfaction. On the other hand, the results do not support the significance of the direct relationship between post-purchase eCRM and customer loyalty but support the significance of the indirect relationship between the two variables mediated by customer satisfaction. This therefore leads to the conclusion that the relationship between post-purchase eCRM and customer loyalty is partial, since the effect is only significant in the presence of the mediator and insignificant in its absence.

6.1.4 Customer satisfaction as a mediating variable

As it was presented on the model of this study, the direct relationship between eCRM implementation and customer satisfaction had to be analysed as well as the mediating effect of customer satisfaction in the relationship between eCRM

implementation and customer loyalty. First of all, the relationship between customer satisfaction and customer loyalty turned out to be significant and played it mediator role properly between the eCRM features and customer loyalty.

Since the relationship between customer satisfaction and customer loyalty was significant, the significant direct relationship between pre-purchase eCRM and customer satisfaction led to a significant indirect relationship between pre-purchase eCRM and customer loyalty. The significant direct relationship between post-purchase eCRM and customer satisfaction also led to a significant indirect relationship between post-purchase eCRM and customer loyalty, while the insignificant direct relationship between at-purchase eCRM and customer satisfaction led to an insignificant indirect relationship between at-purchase eCRM and customer loyalty.

6.1.5 Customer loyalty as a dependent variable

Looking at customer loyalty as the end game of all the above mentioned relationships, this study has successfully analysed the effect of each of the variable involved in the study and brought the level of importance of each variable with respect to customer loyalty. Based on the findings, it can be concluded that only pre-purchase eCRM and customer satisfaction have direct effects on customer loyalty while pre-purchase eCRM and post-purchase eCRM have indirect effects on customer loyalty.

6.2 Conclusion

The Turkish fashion sector generates a lot of income annually and represents 41.9% of the total e-commerce revenue as reported by Statista (2020). The level of competition in this market is very high as there are hundreds of both local and international brands being distributed within the country. It is therefore not an easy task penetrating and gaining a share of the market without putting in place the right strategies.

This study aimed at exploring the importance of the relationships between eCRM implementation, customer satisfaction and customer loyalty in the Turkish fashion market and the findings have been able to prove the

significance of each of these relationships appropriately. More specifically, we develop, operationalize and empirically test a temporal model explaining the relationship between three categories of eCRM (i.e., pre-purchase, at-purchase and post-purchase eCRM) and online customer satisfaction and loyalty, by presenting both theoretical and practical contributions on the subject. The impact of eCRM on customer loyalty is confirmed by Azila & Noor (2011) which measures the impact of the relationship on a sample chosen from university students. Another study by Khalifa & Shen (2005) measuring the effect of eCRM on customer satisfaction also confirms the significance of the relationship between these two concepts. Although all the relationships in Khalifa & Shen (2005) proved significant, pre-purchase was the most dominant driver of online customer satisfaction and loyalty. This study supports the findings of these authors but also supports other existing direct and indirect relationships in the model. These previous studies both measured the relationships between eCRM features and customer satisfaction but focused on different sectors. In this study, we focused on measuring the same relationships in the Turkish fashion sector. Considering the fact that eCRM implementation is not the only determining factor of customer satisfaction and loyalty, it is an important marketing strategy in e-commerce success and cannot be under looked.

Although some of the relationships turned out to be insignificant, this study is considered to have attained its objectives. Based on the information contained in this study, potential and existing e-retailers of Turkish apparel can make better judgements when it comes to adopting marketing strategies that will easily propel their businesses towards the top. Although some of the results do not reconcile with previous studies on the subject, the difference in preferences among respondents may be caused by differences in culture, religion, perceptions, demography and living standards. Therefore, the information in this study will serve the e-retailer better if they, first of all study every detail of their business environment before deciding which better strategies are better suited for their target market.

6.3 Managerial Implications

The findings of this study have significant implication for e-retailers of Turkish apparel as well as prospective e-retailers. We identified three dimensions or eCRM as used in previous studies like Khalifa & Shen (2005), Lu (2002) and Feinberg et al., (2002) with specific components assigned to each dimension. Pre-purchase eCRM focused on website design, search capabilities, customer education and site customization. At-purchase eCRM focused on purchase conditions, product pricing, payment methods and safety. Post-purchase eCRM focused on product quality, order tracking and return policies. With each dimension fully explained, findings of this study show that the relationship between at-purchase eCRM features and customer loyalty is not a significant one. E-retailers can therefore give priority to the eCRM features that significantly contribute to customer satisfaction and loyalty when making decisions related to eCRM implementation in the Turkish fashion market.

Another implication of this study can be seen in its importance for future studies as it will give future researchers ideas on different possibilities and empirical studies that can be developed on the same subject.

6.4 Limitations of this Study

This study, just like any other, has its own limitations and barriers which were major determinants of the outcome. Firstly of all, the data used in this study was collected based on easy access and the decision of the researcher and even though the corresponding results of data analysis are quite encouraging, the limitation of convenience sampling still applies. Also, since the study only takes customer satisfaction into consideration as the mediation factor between eCRM implementation and customer loyalty, there could be other factors that mediate or moderate this relationship.

The features attributed to the eCRM components are not the only features that explain eCRM success. The features were shortlisted based on their adaptability to the Turkish fashion sector. The excluded features were not applicable to this market but will be applicable in a different e-commerce sector or in other countries.

Based on the rapidly changing nature of e-commerce and the dynamic nature of eCRM, the results of this study might not be actual after a certain period of time and the model might require some modifications and updates for future research purposes. Additionally, although the sample size was large enough for statistical analysis in social science, it was relative small compared to the total population of the Turkish fashion sector

6.5 Suggestions for Future Studies

The model used in this study is only an initiation for future studies on the subject of eCRM implementation in the Turkish fashion sector. The e-commerce market in Turkey is fast growing and with almost all sectors participating in one way or the other, further research into this market is inevitable as marketers and e-retailers are constantly seeking ways to better their market share and revenue.

It is recommended for further studies to adapt this model to other sectors of the e-commerce market or use the same model to study these relationships in the fashion sector of another country.

A review of literature on eCRM implementation revealed some features of eCRM components that were not excluded from this study. It is therefore the researcher recommendation that future studies may include the excluded features such as alternative channels, loyalty programs, feedback channels, online communities, among others.

The model used in this study only considered customer satisfaction as the mediator between eCRM implementation and customer loyalty. Future studies may modify this model by adding other mediators and moderators of replacing customer satisfaction with another variable.

Based on the size of the population, future researchers could implement this model by testing a bigger sample size to improve the generalization standard of findings.

The objective of this study as stated from the beginning has been attained and findings reflecting the direct and indirect relationships between eCRM implementation and customer loyalty are reported. The findings are accurate

with respect to the collected data and the model gives room for further studies on the relationship between eCRM and customer satisfaction and loyalty.

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APPENDIX

APPENDIX A: Survey Questionnaire (English Version)

APPENDIX B: Survey Questions (Turkish Version)

APPENDIX C: Ethics Committee Approval form here

APPENDIX A: Survey Questionnaire (English Version)

Managing Online Customer Satisfaction and Loyalty through eCRM in a Digital B2C Market; Case of Turkish Fashion Brands.

This is an MBA Thesis survey for ASHINYI ATEGHANG NICOLINE, student at Istanbul Aydin University in Turkey. The aim of this questionnaire is to understand how Electronic Customer Relationship Management (eCRM) influences Customer Satisfaction and Loyalty in the online market of Turkish fashion. The researcher appreciates the time you dedicate to filling the questionnaire. Thanks in advance.

Section 1: Demographic Questions

1. Gender

☐ Male ☐ Female

2. Age Range

☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-55 ☐ Above 55

3. Education

☐ High School ☐ Undergraduate ☐ Masters ☐ Doctorate

4. Monthly Income

☐ Less than 3000TL ☐ 3000TL-5000TL

☐ 5000TL-10000TL ☐ Above 10000TL

Section 2: Market Specific Questions

1. Do you shop online?

☐ Yes ☐ No

2. Which fashion products do you buy online?

☐ Cloths ☐ Shoes ☐ Bags ☐ Accessories

3. Which of these fashion brands have you bought from?

☐ LC Waikiki ☐ Defacto ☐ Ipekyol

☐ Trendyol ☐ Others……

4. Which of the following platforms do you use to buy from this brands?

☐ Website ☐ Mobile App ☐ Social Media ☐ Blogs

5. How many purchases have you made in the last 6 months?

☐ None ☐ Less than 5 ☐ More than 5

Section 3: Variable Related Questions

This section contains statements that measure the effects of eCRM on customer satisfaction and loyalty. Please indicate your opinion by showing your level of agreement or disagreement using the 1 to 5 scale guideline.

1= Strongly Disagree 2= Disagree 3=Neutral 4= Agree 5= Strongly Agree	5	4	3	2	1
Pre-purchase eCRM Questions • Display pages within the platform are easy to read • Images of products online show product features well enough • Product characteristics are well presented alongside images • Web pages are visually appealing • It is easy to access variety of products when I buy online • Searching for products takes very little time					
At-purchase eCRM Questions • Product prices are very encouraging • It is more convenient to buy online rather than going to physical stores • The variety of payment methods make it easier to buy online • I feel safe in my transactions within the online platform • My personal information is well protected on this shopping site					
Post-Purchase eCRM Questions • Products delivered to me are always satisfying • I am able to track the products after I place my order • It is easy to return products that do not satisfy my expectations					
Customer Satisfaction Questions • This site uses personal information to provide customized products • This site attends to customer complaints promptly • This site takes genuine interest in customer problems • The sales process is designed to satisfy the customer's needs					
Customer Loyalty Questions • I "					

Thank you for Submitting!

I am very grateful for your assistance in my data collection process, I look forward to sharing the full study with you once it's done!!!

APPENDIX B: Survey Questions (Turkish Version)

Survey Questions (Turkish Version)

Dijital B2C Pazarında eCRM aracılığıyla Çevrimiçi Müşteri Memnuniyeti ve Sadakat Yönetimi; Türk Moda Markaları Örneği

Bu, ASHINYI ATEGHANG NICOLINE için bir MBA Tezi araştırması, İstanbul Aydın Üniversitesi'nde öğrenci. Bu anketin amacı, Elektronik Müşteri İlişkileri Yönetimi'nin (eCRM) Türk modasının çevrimiçi pazarında Müşteri Memnuniyeti ve Sadakatini nasıl etkilediğini anlamaktır. Araştırmacı, anketi doldurmak için ayırdığınız zamanı takdir ediyor. Şimdiden teşekkürler.

Bölüm 1: Demografik Sorular

1. Cinsiyet

☐ Erkek ☐ Kadin

2. Yaş aralığı

☐ 18-24 ☐ 25-34 ☐ 35-44

☐ 45-54 ☐ 55’den Fazla

3. Eğitim

☐ Lise ☐ Lisans ☐ Yuksek Lisans ☐ Doktora

4. Aylık gelir

☐ 3000TL’den az ☐ 3000TL-5000TL

☐ 5000TL-10000TL ☐ 10000TL’den Fazla

Bölüm 2: Piyasaya Özel Sorular

1. Online alışveriş yapıyor musunuz?

☐ Evet ☐ Hayir

2. Hangi moda ürünlerini çevrimiçi satın alıyorsunuz?

☐ Giyim ☐ Ayakkabilar ☐ Cantarlar ☐ Aksesuarlar

3. Aşağıdaki markalardan hangileri satın aldınız?

☐ LC Waikiki ☐ DeFacto ☐ Ipekyol

☐ Trendyol ☐ Diğerleri……

4. Bu markalardan satın almak için aşağıdaki platformlardan hangisini kullanıyorsunuz?

☐ Web Sitesi ☐ Mobil Uygulama ☐ Sosyal Media ☐ Blog

5. Son 6 ayda kaç kez alım yaptınız?

☐ Yok ☐ 5'ten az ☐ 5'ten fazla

Bölüm 3: eCRM ve Müşteri Memnuniyeti Soruları

Bu bölüm, eCRM'nin müşteri memnuniyeti ve sadakati üzerindeki etkilerini ölçen ifadeler içermektedir. Lütfen 1 ila 5 ölçekli yönergeleri kullanarak anlaşma ya da anlaşmazlık düzeyinizi göstererek fikrinizi belirtin.

1= Kesinlikle Katılmıyorum 2= Katılmıyorum 3= Tarafsız 4= Katılıyorum 5= Kesinlikle Katılıyorum	5	4	3	2	1
Satın alma öncesi eCRM sorular • Platformdaki sayfaların okunması kolay • Ürünlerin çevrimiçi görüntüleri ürün özellikleri yeterince iyi gösterir • Ürün özellikleri görüntüleri yanında iyi sunuldu • Web sayfaları görsel olarak çekici • Online satın aldığımda çeşitli ürünlere erişmek kolaydır • Ürünlerin aranması çok az zaman alır					
Satın alma sırasında eCRM sorular • Ürün fiyatları çok cesaret verici • Fiziksel mağazalara gitmek yerine online satın almak daha uygun • ödeme yöntemleri çeşitli çevrimiçi satın almak kolaylaştırır • Online platformdaki işlemlerimde güvende hissediyorum • Kişisel bilgilerim bu alışveriş sitesinde iyi korunur					
Satın alma sonrası eCRM sorular • Bana teslim ürünler her zaman tatmin edici • Siparişimi verdikten sonra ürünleri takip edebiliyorum • Beklentilerimi karşılamayan ürünleri iade etmek kolaydır					
Müşteri memnuniyeti sorular • Bu site özelleştirilmiş ürünler sunmak için kişisel bilgileri kullanır • Bu site müşteri şikayetlerine derhal katılmaktadır • Bu site müşteri sorunlarına gerçek bir ilgi göstermektedir. • Satış süreci, müşterinin ihtiyaçlarını karşılamak için tasarlanmıştır.					
Müşteri sadakati sorular • İnternetten moda ürünlerini almaya devam etmeyi planlıyorum • Hala online moda ürünleri satın almayı tercih ediyorum çünkü çok daha kolay					

Gönderdiğiniz için teşekkürler

Veri toplama sürecimdeki yardımlarınız için çok minnettarım, bittiğinde çalışmanın tamamını sizinle paylaşmayı dört gözle bekliyorum!!!

APPENDIX C: Ethics Committee Approval form here

Evrak Tarih ve Sayısı: 09/11/2020-3648

T.C.
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