

THE ADOPTION AND IMPLEMENTATION OF
CUSTOMER RELATIONSHIP MANAGEMENT (CRM) ACTIVITIES
IN INTERNET BUSINESSES IN TURKEY

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ABSTRACT

The Adoption and Implementation of Customer Relationship Management (CRM) Activities in Internet Businesses in Turkey

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Today the rapid changing and developing competitive environment of technology, especially contribution and increasing effect of Internet has been forcing companies to use information technology. In light of these developments, Internet shopping and e-business have increased and become very popular both globally and in Turkey. Thus, using customer relationship management (CRM) applications is considered nearly compulsory for businesses to maintain strategic advantage in the information age. The purpose of this study is to examine the adoption and implementation of customer relationship management (CRM) activities in Internet businesses in Turkey and these applications' effects on company success. Data collected from 81 Internet businesses in Turkey was analyzed by using descriptive, factor, correlation and regression and ANOVA analyses. The results of these analyses show that companies have various orientations for implementing CRM systems. They display an advanced level of implementing interface-based and relationship-based CRM activities, mostly improving customer satisfaction and loyalty. However, this study specifically demonstrated that customer-based performance dimensions should be supplemented by various other performance metrics.

KISA ÖZET

Türkiye’de İnternet’te Faaliyet Gösteren Firmalarda Müşteri İlişkileri Yönetimi (MİY) Uygulamaları

Hülya Zaralı

Günümüzde hızla değişmekte ve gelişmekte olan rekabet ortamında teknolojinin, özellikle de İnternet’in iş dünyasına katkısı ve artan etkisi kurumlar için bilgi teknolojileri kullanımını zorunlu hale getirmektedir. İnternet ortamındaki faaliyetlerin/alışverişlerin yaygınlaşmasıyla birlikte dünyada ve Türkiye’de bu platformda gerçekleştirilen faaliyetler artmış ve özellikle müşteri ilişkileri yönetimi (MİY) uygulamalarının kullanılması stratejik avantaj yakalamak açısından neredeyse zorunlu hale gelmiştir. Bu çalışma Türkiye’de İnternet ortamında faaliyet gösteren firmalarda müşteri ilişkileri yönetimi (MİY) uygulamalarının durumunu ve firmaların başarılarına olan etkilerini araştırmayı amaçlamaktadır. 81 e-işletmeden toplanan veri tanımlayıcı, faktör, korelasyon, regresyon ve ANOVA analizleri kullanılarak analiz edilmiştir. Bulguların firmaların MİY sistemlerini edinmede çeşitli eğilimleri olduğunu ve gerek ara yüz/önyüz-tabanlı gerekse ilişiksel bazlı MİY faaliyetlerini kullanarak müşteri memnuniyeti ve sadakatini artırmayı hedeflediklerini göstermektedir. Bu çalışmada MİY performansının sadece müşteri-tabanlı ölçüm kriterleriyle değerlendirilmemesi ve çeşitli ölçüm kriterlerinin önemi vurgulanmaktadır.

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LIST OF ABBREVIATIONS

| | |
|-----|----------------------------------|
| CRM | Customer Relationship Management |
| BSC | Balanced Scorecard |
| HCI | Human-Computer Interaction |
| IS | Information System |
| IT | Information Technology |
| MIS | Management Information Systems |

CHAPTER 1

INTRODUCTION

In recent years, organizations and companies have realized the importance of knowing customers better. Customer relationship management (CRM) is an approach that increases the strategic significance of managing and making effective use of customer knowledge. CRM enables organizations to explore and use knowledge of their customers and to foster profitable and long-lasting one-to-one relationships.

The traditional models of interaction between businesses and their customers are redefined by the successful adoption of Information Technology (IT)-enabled CRM both nationally and globally. With the development in the area of information technology and the improvement of the infrastructure of Internet, the use of the electronic environment for customer related activities flourished. Thus, the concept of electronic customer relationship management or briefly “e-CRM” became comprised.

CRM and e-CRM are crucial topics for management sciences. They are regarded as a source of competitive advantage. They are strategic issues for the organizations and there are many areas for development in this area. Finally, there is a fact that all successful online businesses have a strong CRM/e-CRM base and investment such as amazon, e-bay, hepsiburada.com, yemeksepeti.com, etc.

Internet can be considered as a major tool to create competitive advantage by offering opportunities like personalized services, confirmation of orders in real time and many other value added activities.

Internet is a vital tool in identifying and determining the differences in customers' behavior such as preferences and attitudes toward companies' products, Web sites, etc. Additionally, it can be supported with related technology at the back-end such as customers' database, data warehousing and data mining, value adding and personalized products or services. These create an edge over competing companies (Ab Hamid, N.R, 2005).

The main purposes of this study are:

- 1) investigating the level of adoption and implementation of customer relationship management activities in Internet businesses, Web sites and companies in Turkey,
- 2) identifying the major orientations for implementing CRM activities in Turkish Internet businesses,
- 3) discovering the usage level of "interface-based activities" for the purpose of e-CRM,
- 4) discovering the usage level of "relationship-based activities" for the purpose of e-CRM,
- 5) determining which communication tools and channels are used for e-CRM by Internet businesses in Turkey,
- 6) measuring the overall perceived success and performance of e-CRM activities by using a multi-dimensional performance measurement tool: The Balanced Scorecard (BSC).

For this purpose, a literature survey was conducted by an extensive review of books, journals, Internet sources and dissertations. Then, a questionnaire was prepared and delivered to various Turkish Internet businesses. Descriptive analyses,

factor analyses, correlation analyses, regression analyses, and ANOVA analyses were used for evaluation of the collected data.

Our contributions with this study are:

1. examining e-CRM activities under two dimensions:
 - a. Human computer interaction (HCI) (Interface-based) activities,
 - b. Relationship-based activities,
2. creating an exhaustive list of interface-based and relationship-based e-CRM activities by creating an “HCI Scale” and a thorough review of the literature,
3. discovering the level of e-CRM activities in Turkey ,
4. extending the implementation orientation of CRM found in the literature by contributing additional dimensions,
5. extending the measurement of e-CRM performance from a pure customer-based point of view to a multidimensional perspective by using BSC: a performance measurement tool including four dimensions: Customer, Internal Business, Innovation and Learning, and Financial Perspectives.

This thesis is composed of the following chapters. Chapter 1 includes the introduction as an overview for the study. Chapter 2 reviews the literature on customer relationship management (CRM) and e-CRM, which is an extension of CRM in the Internet environment, e-loyalty/online loyalty, personalization, motivations for CRM implementations in organizations, Human Computer Interaction (HCI), performance measures-metrics and Balanced Scorecard (BSC) dimensions deeply. Chapter 3 introduces the model and the hypotheses of the study.

Chapter 4 presents the methodology of the study: preparation and administration of the questionnaire and the data analysis approach. Chapter 5 includes the descriptive and multivariate analyses, and the findings with the result of the analyses. Finally, in Chapter 6, implications and limitations of the study are discussed.

CHAPTER 2

LITERATURE REVIEW

Customer Relationship Management (CRM): An Overview

There are many definitions of CRM that can be found in the literature. Chablo (1999) defines CRM as “a comprehensive approach which provides seamless integration of every area of business that affects the customer, namely, marketing, sales, customer service and field support through the integration of people, process and technology, taking advantage of the revolutionary impact of the Internet.” Although most of the others are similar to this comprehensive definition, it is necessary to examine a few others.

Brown (2000) states that CRM is neither a concept nor a project. CRM is a business strategy, which aims to understand, anticipate and manage the needs of an organization’s existing and potential customers. He presents the strategic customer care 5-pillar model to build a CRM model for enterprises. These are strategic, process, organizational and technical change and management of enterprise around customer behavior.

More simply, Handen (2000) defines CRM as the process of acquiring, retaining and growing profitable customers. Actually, this definition summarizes the core of CRM thought. In order to represent value to the customers and create loyalty, CRM requires an obvious focus on the service attributes. According to Handen to

implement a CRM project effectively, five dimensions are considered important: Strategy, Organization, Technology, Segmentation, and Process.

In a similar approach, Findlay(2000) mentions that CRM contemplates on the retention of customers by collecting all data from every interaction and from all access points whether they are phone, mail, Web or field. The organization can then use this data for specific business purposes, which could be Marketing, Service, Support or Sales while concentrating on a customer-centric approach rather than a product-centric approach.

Peppers, Rogers, & Dorf (1999) describe CRM as a concept that makes it possible to an organization to customize specific products or services to each individual customer. They have focused on four steps (identify, differentiate, interact and customize) for one-to-one marketing.

As these definitions clearly show, the business world is shifting from a product focus to a customer focus, and thus, managers see that the improvement of existing customer relations brings the benefit of profitable and sustainable revenue growth. CRM enables a business to understand better the explained, and especially the implied requirements of its customers.

Triggered by increasing competition due to the less loyal and more demanding nature of customers, CRM has become a common practice for large enterprises through extensive use of constantly developing computer, storage and software technologies.

CRM involves the continuous use of advanced information about existing and potential customers in order to anticipate and respond to their needs and describes a combination of business processes and information technology to discover knowledge about the customers and answer questions such as ‘‘who are the

customers/consumers?’, ‘‘what do they do?’’ and ‘‘how do they behave?’’. With such effective use of information and communication technologies, firms can offer their customers various products and services, agreeable prices, and customized and personalized services, all at the same time.

Effective management of information and knowledge is essential and critical to the concept of CRM. For this reason, companies have to gather the correct information from both internal and external sources and use it to provide a unified view of the customer for targeted marketing purposes.

Effective management of information and knowledge becomes possible with the use of appropriate technologies. By means of Internet technologies, customers generate their own data and these can be used for marketing, sales and customer service applications. In a world connected by a huge network called Internet, CRM has become an obligation for organizations and companies.

Internet Technology as a Tool in Customer Relationship Management (CRM)

In this section of the literature review, how Internet technology enables and enhances CRM applications will be handled as one of the emergent issues in the relevant literature.

To start with, Feinberg and Kadam (2002) strikingly declare, ‘‘Businesses are moving online, not as a matter of choice, but as a matter of necessity’’. Thus, the use of the Internet as a way of commerce and data gathering instrument presents an opportunity for business to use the Internet as a tool for customer relationship management.

As the number of Internet users is growing rapidly, retailers and other organizations want to take the advantage of this enormous online market potential. Internet changed the way companies do business greatly. It made it easier and broadened the communication channels and interaction intensity between customers and organizations. Furthermore, it forces companies to a powerful competition.

Xu, Yen, Lin, and Chou (2002) support this idea by mentioning that, “Internet creates some factors like heightening customer expectations and borderless markets. These factors force companies to switch from a product-centric approach to a customer-centric approach“

However, one of the major challenges of e-business is that Internet’s use in global market makes it more difficult to attract new customers and retain existing ones. Therefore, a customer-centric strategy is necessary for the companies that want to be successful in the Internet era. The best solution is making CRM include the Internet technologies to provide businesses with more effectively managed customer relationships through any direct or indirect consumer channel.

At this point, it is necessary to state some key characteristics and benefits of the Internet for CRM. Internet, as a pull technology, obtains customers with more proactive attitudes toward continuing relations with companies. Transactions between customers and companies are made easier by this enhanced level of interactivity. Internet communication channels like e-mail acts as a push technology and they enable companies efficiently manage the communication with customers. Interactivity and quick implementation of new products and services increase competition in terms of customer retention and attraction. In addition to these, Internet provides transaction logging. This helps establishing data warehouses,

which provide timely and easy access to key information needed by CRM and CRM is able to mine the data warehouse to identify trends and opportunities.

The importance of the Internet was realized rather quickly in the Turkish business environment, too. Many people, companies and organizations started to use the Internet because of its benefits. However, as the discussions in the findings will show, the level of advancement in Internet usage is still not at a fully integrated and strategic level for businesses.

Looking at general usage though, statistics show that there is rapid acceptance in general. Some demographic characteristics of Turkish people in terms of Internet usage according to their age group and gender are listed in the Table 2.1. This table shows Internet usage by gender and age group in 2004 in Turkey and Table 2.2 shows the percentages of the activities of individuals over the Internet in 2005. These data are taken from Turkish Statistical Institute.

Table 2.1- Internet Usage by Gender and Age Group in 2004 in Turkey

| Age group | Internet Use | |
|-----------|--------------|-----------|
| | Female | Male |
| 16-24 | 1 057 079 | 1 965 750 |
| 25-34 | 676 835 | 1 477 391 |
| 35-44 | 243 235 | 704 745 |
| 45-54 | 84 606 | 372 042 |
| 55-64 | 21 285 | 83 067 |
| 65-74 | 2 201 | 24 260 |

In Table 2.3 the construction rate of firms' that perform marketing activities over the Internet or other channels were shown. Table 2.4 displays the types of Web sites that are visited by Turkish Internet users most frequently. These data are taken from 2005 Turkey Internet Report of TIMNET Internet Media Marketing.

These statistics show that the Turkish market is quite similar to the global Internet market in general in terms of demographic distribution of online customers and usage purposes of the Internet.

Table 2.2- Activities of Individuals over the Internet in 2005

| Activities | Percentages (%) |
|--|-----------------|
| COMMUNICATION | 78,23 |
| Sending / receiving e-mails | 66,84 |
| Telephoning over the Internet / Videoconferencing | 11,36 |
| Other (use of chat sites etc.) | 40,39 |
| INFORMATION SEARCH AND ONLINE SERVICES | 90,16 |
| Finding information about goods and services | 43,31 |
| Using services related to travel and accommodation | 14,25 |
| Listening to Web radios/watching web television | 28,18 |
| Playing or downloading games, images or music | 43,58 |
| Downloading software | 22,81 |
| Reading/downloading online newspapers/news magazines | 55,77 |
| Looking for a job or sending a job application | 10,57 |
| ORDERING AND SELLING OF GOODS AND SERVICES, BANKING | 15,95 |
| Internet banking | 12,90 |
| Other financial services (e.g. Share purchasing) | 2,95 |
| Purchasing/ordering goods and services (excl. Shares/financial services) | 5,59 |
| Selling goods and services (eg. Via auctions) | 1,07 |
| INTERACTION WITH PUBLIC AUTHORITIES | 39,97 |
| Obtaining information from public authorities Web sites | 37,64 |
| Downloading official forms | 10,65 |
| Sending filled form | 6,02 |
| TRAINING AND EDUCATION | 30,71 |
| Formalized educational activities (school, university etc.) | 26,83 |
| Post educational courses | 7,22 |
| Other educational activities related specifically to employment | 4,37 |
| HEALTH | 22,97 |
| Seeking health-related information | 22,38 |
| Making an appointment online with practitioner | 0,50 |
| Requesting a prescription online from a practitioner | 0,02 |
| Seeking medical advice online from a practitioner | 1,86 |

Table 2.3- Construction Rate of the Firms

| | Firm Construction Rate |
|-----------------------------------|------------------------|
| Internet + Other Selling Channels | 92% |
| Only Internet Sale | 8% |

Table 2.4 - Types of Web Sites that are visited by Turkish Internet Users

| | Total | Age Groups | | | Gender | |
|--------------------|-------|------------|-------|-------|--------|------|
| | | 15-24 | 25-39 | 40-54 | Female | Male |
| Chat Rooms | 55% | 62% | 43% | 33% | 51% | 58% |
| Game Sites | 27% | 32% | 18% | 7% | 20% | 31% |
| Work Related Sites | 25% | 17% | 46% | 33% | 26% | 25% |
| Shopping Sites | 13% | 11% | 16% | 20% | 18% | 10% |
| Newspapers | 3% | 2% | 4% | 0% | 5% | 1% |
| E-mail | 2% | 3% | 0% | 0% | 3% | 1% |

Electronic Customer Relationship Management (e-CRM)

It has already been mentioned in many studies that the Internet will continue to change the way customers and suppliers interact with one another, in terms of speed and ease. This fact requires that the integration of Internet technology into CRM activities occur at all level throughout an organization. In the current information age, only an Internet integrated CRM can successfully assist companies to move customers to the heart of the business circle, and then raise customer satisfaction and retention. Thus, a new term “e-CRM” has been created to express the combination between the Internet and CRM and will be examined in this section.

Starting with a definition of e-CRM, Lee-Kelley, David, and Robin (2003) describe e-CRM as the marketing activities, tools and techniques, delivered via the Internet which contains e-mail, world wide web, chat room, e-forums etc. to carry on locating, building and improving long-term customer relationships to enhance their individual potential.

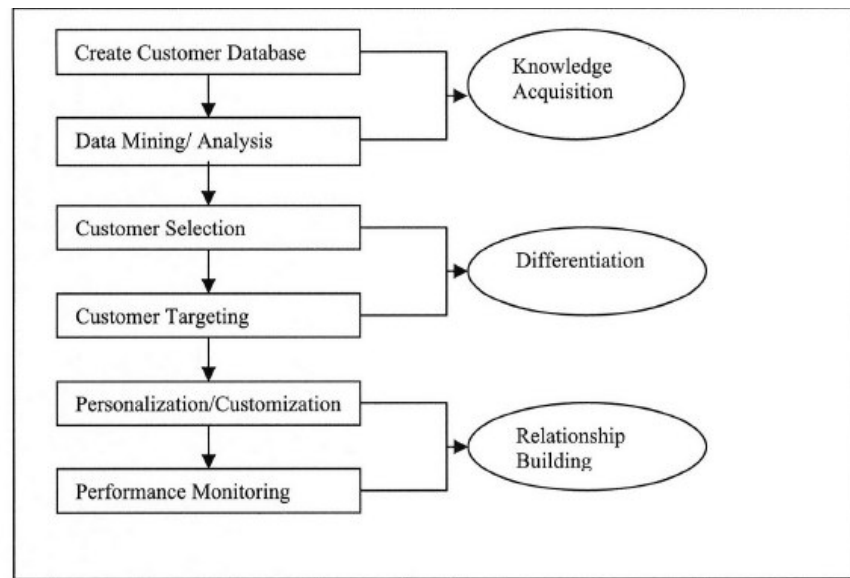
We can divide e-CRM process into two parts technically: Front-end and Back-end processes. The e-CRM structure begins with the front-end tool when customers visit or browse the company's Web site. A customer's browsing activities will be captured by a cookie file and logged in a server for initial profiling purposes. These activities would be very useful for future marketing plans. Customers' personal information and browsing profiles are built up and stored in a database at the back-end. At this point, customers can interact with the database to check product/service availability, retrieve order details, track an order status as well as personalize certain services. Afterwards, data warehouse will sort specialized periodical reports of customers' activities. These reports are used as inputs to the mining process and after this process, useful signals will be sent to companies to determine customers' behavior and create effective segmentation.

Database is the groundwork for any customer relationship management activity (Winer, 2001). Customer database helps a company to understand its customers in terms of preferences and past activities. It is also used for segmenting the company's clients by geographical areas, products, and businesses. Actually, the best way to manage customer data is through data warehousing (Anton, 2000). A data warehouse is a database system that is capable to store a very large amount of data for quick analysis and reporting. On the other hand, when data comes from different sources, extracting it from a data warehouse can be very difficult. Thus,

another marketing application called data mining is utilized for grouping customers, which leads to customer segmentation. A strategic application such as data mining primarily focuses on the knowledge discovery, predicts future behavior of the customers, and hence contributes to the greater understanding of customer behavior - knowledge acquisition (Srivastava, Wang, Lim and Hwang, 2002). This approach, which uses knowledge based on customers' likes and preferences, is known as database marketing which evolves into one-to-one marketing or relationship marketing (Grönross, 1997). After collecting customer data, the class and level of service can be easily personalized, customized and delivered according to each customer's preferences, likes, and value and consumption patterns. These approaches enhance customer relationships and let the company to strategize the marketing activities more effectively and efficiently (Ab Hamid and Kassim, 2004). Figure 2.1 illustrates the E-CRM model described above.

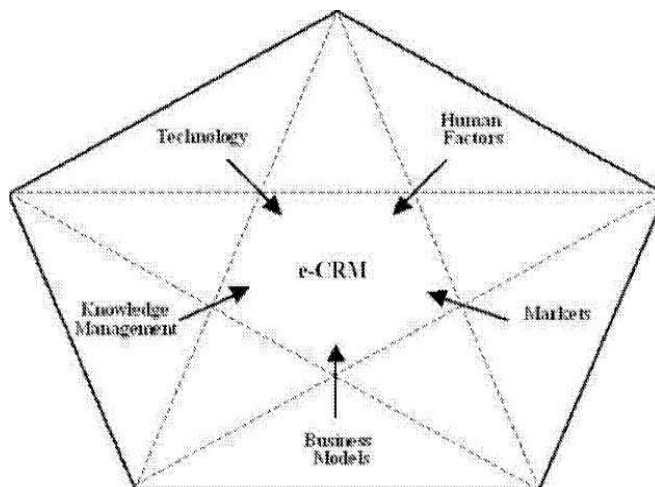
Romano and Fjermestad (2003) approach e-CRM from the perspective of five research areas. These are e-CRM markets, e-CRM business models, e-CRM knowledge management, e-CRM technology and e-CRM human factors. Considering their classification, each dimension is briefly explained here. E-CRM markets perspective involve how best to integrate e-CRM systems to the markets effectively and efficiently. In the perspective of e-CRM business models, the customer is placed at the core of electronic commerce and e-CRM provides back-end support and meets customers' expectations. In the e-CRM knowledge management perspective, customer information is collected by building data warehouses, processed, analyzed, and then returned in the form of meaningful knowledge about customers to the companies. In the e-CRM technology perspective, the authors identify 20 different technologies for e-CRM such as chat rooms,

forums, e-mail, auctions etc. Finally, in the perspective of e-CRM human factors, behavioral, affective and attitudinal factors that play role in e-CRM examined. After examining these five research areas, Romano et al. (2003) present a conceptual framework based on these as shown in Figure 2.2.



Source: Adapted from Winer (2001) and Moon (2000)

Figure 2.1 – E-CRM model



Source: Adapted from Romano and Fjermestad (2003)

Figure 2.2 – E-CRM research framework

In another classification of e-CRM dimensions, Sterne (1996) has identified three important e-CRM areas:

- 1) Pre-sales support (information about the company, products and services, etc.)
- 2) E-commerce services (order fulfillment, services, etc.)
- 3) Post-sales support (maintenance and technical support, etc.)

Additionally, Anton and Postmus (1999) identify 25 factors that combine to be an index of E-CRM activities of firms according to Sterne's classification of e-CRM. Table 2.5 shows this identification.

Table 2.5- e-CRM Features

| | |
|--|---|
| Pre-sale support (Contact and information, general E-CRM) features | <ol style="list-style-type: none"> 1. Site customization. 2. Local search engine 3. Membership. 4. Site tour 5. Site map 6. Introduction for first-time users 7. E-mail 8. Fax 9. Postal address 10. Toll-free numbers 11. Call back button 12. Voice over IP. 13. Mailing list 14. Chat 15. Electronic bulletin board |
| E-commerce service features | <ol style="list-style-type: none"> 16. Online purchasing. 17. Product information online. 18. Customization possibilities. 19. Purchase conditions. 20. Preview product. 21. Links. |
| Post-sales support features | <ol style="list-style-type: none"> 22. FAQs. 23. Problem solving. 24. Complaining ability. 25. Spare parts. |

Source: Adopted from Feinberg et al (2002)

E-CRM systems integration will change the way work is completed and how relationships are established and managed. E-CRM system integration is leading to new distribution and processing capabilities and requires organizations to develop new strategies to build and maintain effective and consistent worldwide brand images. Integration will also mean that other factors such as logistics and rapid delivery of products, information, and services, cyber-intermediation must be considered from strategic and theoretical perspectives. (Romano et al, 2003)

There are various Internet tools applied towards E-CRM, which facilitate companies to provide the best customer service, as a result enhancing customer relationships. The number of internet-based technologies for e-CRM is growing rapidly. Romano et al. (2003) spot some 20 different technologies that could be used for e-CRM. Moreover, they define three types of relationship management and categorize CRM technologies as passive, active, and interactive. These represent the role of the customer in the communication process.

This study attracts attention because of using a relationship-based approach to understand the value and importance of each tool. Table 2.6 shows emergent technologies for e-CRM according to Romano et al. (2003) study.

Customers communicate via the channel they prefer and companies can communicate with their customers' preferred technology. Furthermore, some other communications technologies as well as telephone, fax, frequently asked questions (FAQs), video conferencing, voice messaging, video messaging and online meeting/e- conference could be used.

Table 2.6 - Emergent Technologies for E-CRM

| | |
|-------------|--|
| Passive | <p>Cookies Chat rooms Bulletin boards and fun clubs Mailing lists News groups Observation studies through virtual reality and simulated environments Product-related discussion groups and lists</p> |
| Active | <p>Chat rooms (hosted by Seller) Bulletin boards (hosted by Seller) Forums (hosted by the Seller) Internet surveys Product-related discussion groups and lists Recommender software</p> |
| Interactive | <p>E-mail Forums Online focus groups Interactive online interviews Survey panels Auctions Online trade shows Shopping agent</p> |

Source: Romano et al. (2003)

The adoption of e-CRM tools can provide advantages to the firms' operational effectiveness and therefore deliver value to adopting companies. Some advantages of e-CRM created by using e-CRM tools effectively are:

- reduce the cost of communicating with customers
- reduce administrative and operational costs since customers are empowered to self-configure products, track orders and make changes themselves.
- offer more efficient workflow because of the integration between e-CRM applications with back-office systems such as production, finance and supply chains, thus delivering cost savings.
- improve sales by means of better market segmentation,

- increase the profitability of firms,
- improve the overall customer interaction, which in turn would lead to better service, improve customer satisfaction and loyalty and at last customer lifetime value.

E-Loyalty / Online Loyalty

E-CRM is crucial for the success of online industries by using Internet based technologies as an effective, efficient and interactive medium of acquiring useful knowledge about customers. By embedding an e-CRM strategy into the business strategy, it is possible to:

- understand customer behavior and preferences for future use, and
- acquire customer loyalty and improve profitability.

The main point of using customer relationship management is to understand the needs and wants of individual customers by learning and delivering online-specific advantages according to customers' likes.

Studies often report that attracting new customers cost much more than retaining existing and loyal customers. Reichheld and Sasser (1990) found that existing customers are less price sensitive and they are also more economical to maintain than new customers.

Understanding customer preferences is the heart of marketing and key to capturing them (Dolan, 2001). "How do customers make purchase decisions?" is a major question in the marketing literature. However, understanding customers is becoming much more difficult every day. Thus, companies must utilize any source available to obtain knowledge about customers, which in turn will enable

them to increase revenue and profits (Galbreath, 2002). It also discusses that learning about individuals is vital to keeping customers. Apparently, the Internet is a cost-effective medium of information gathering (Boyle, 2001; Hoffman and Novak, 1996). Arnott and Bridgewater (2002) suggest that Internet interactivity increases marketers' ability to comprehend consumer behavior that can assist marketers' to offer products or services according to what customers want.

CRM is a business strategy and it requires a customer-centric business philosophy and culture to support effective marketing, sales and service processes. Gosney and Boehm (2000) define CRM as a process, which acquires, retains and grows profitable customers. They put emphasis on that CRM need a clear focus on the service attributes that stand for value to the customer and that create loyalty.

E-loyalty is achieved when customers do not even consider the competition's offers and when customers want to be associated with the organization's site and tell others about it. These are summarized with three measures of e-loyalty: Repurchase Cross-purchase and Referrals to other customers.

There are two major strategies to accomplish customer loyalty: 'locking in' and customer satisfaction. There are strategies of hindering customers from switching from the company's brand by imposing barriers to change. These barriers are best created by seeing the customer ultimately. Therefore, customer satisfaction is achieved by creating trust and treating them well in the future too. For this reason, customers are not interested in altering such companies and by making continuous transactions with them, which is the most significant sign of loyalty.

Moreover, online complaint management allows one-to-one solutions to the problems and prevents to avoid 'silent' account cancellation. Hansen (1996) emphasizes that the use of online complaint management can help optimizing net

profit, because of a possible conflict resolution dialogue. Moreover, the customer tends to be more exposed in voicing complaints and this causes a new opportunity to increase customer satisfaction. (Salmen and Muir, 2003)

Salmen and Muir (2003) also added that “A variety of new technological aids like online monitoring operations and personalization techniques have become available to simplify the acquisition of customers and their classification according to individual demands”.

Personalization: A Major Facet of E-CRM

Personalization and customization are considered as core elements in the achievement of e-loyalty in e-commerce. Currently, the most promising strategies to accomplish e-loyalty are characterized through online personalization, especially in the segment of younger, highly educated, highly paid, or wealthy inheritor customers. (Salmen and Muir, 2003)

Galbreath (2002) also illustrates that processed information could create better user experience such as personalization, which brings about building trust and loyalty.

Electronic Customer Relationship Management (e-CRM) has forced marketing managers to reevaluate their relationship with customers in the point of how, when and to what extent they interact with their customers. Companies will lose loyal customers if they are not aware of and act in response to the changing demands of them. Furthermore, marketing to a new a customer will be more expensive and time consuming. Every customer will desire specialized services and they will want to know why one product is preferable than the other one.

A marketing revolution will emerge because of the Internet (Arnott and Bridgewater, 2002; Berthon, Pitt, Katsikcas, and Berthon, 1999; Kiani, 1998; Lazer and Shaw, 2000; Peattie and Peters, 1997; Sandelands 1997). However, this revolution will only be realized if marketers take advantage of the potential of the Internet to deliver personalized services (Arnott and Bridgewater, 2002). According to Pine (1993), in many instances companies are driven to offer personalization in their business models. The information gathered about customers via the Internet helps companies to offer unique services to individual customers (Bradshaw and Brash, 2001).

Motivations for CRM Implementation

Karakostas, Kardaras, and Papathanassiou (2005) made an exploratory survey, which was conducted to understand the state of CRM adoption in the UK financial services sector. After the survey, they categorized organizations' main drive for making a CRM implementation into four reasons. These are:

1. Competitors
2. Cost reduction
3. Internal efficiency
4. Customer satisfaction

Karakostas' et al. (2005) empirical investigation on UK financial services shows that customer satisfaction is the most prominent motivation among these followed by internal efficiency, competitors and cost reduction respectively. This approach will be used in the model developed for this study with two additional dimensions contributed as well.

Human Computer Interaction (HCI)

The use of Web sites by customers for purchase and information gathering has become widespread both worldwide and in Turkey. Since the first contact point between a company and a potential buyer is through Web sites, it is very important for organizations to get the “first impressions” effectively- present transactional and personalization as well as product/service information and user-friendly designs. Consecutively, the rate to keep customers as well as changing visitors to buyers may likely be higher. (Ab Hamid, 2005)

Human computer interaction (HCI) is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use. HCI features’ objectives are improving interaction between users and computers, providing and improving customer satisfaction, and making customers loyal.

Human-Computer Interaction (HCI) is an interdisciplinary field that has attracted researchers, educators, and practitioners from different disciplines. HCI has gained attention during latest years due to the rapid development and advancement in information and computer technology. To better use advanced technology, we need to understand users, the interaction among them, and related tasks.

Design methodologies in HCI aim to create usable and useful interfaces. While usability is about being manageable with ease and efficiency, usefulness involves allowing the user to be able to complete relevant tasks.

There are seven principles that can be used to guide or evaluate design at any time in the process: Tolerance, Simplicity, Visibility, Affordance, Consistency, Structure and Feedback. (Raskin, 2000) He examines each dimension in detail as shown in Table 2.7.

Table 2.7 – The Seven Principles of Design Evaluation

| Principle | Description | Example |
|-------------|--|---|
| Visibility | Clarity | Is the goal obvious? Icons used? |
| Feedback | Information sent back to user after their action | Sound? Label showing success or failure? |
| Affordance | How clear is the use of an element to the user? | Label “Push” on one side of a door; a button saying “Click Me” |
| Simplicity | KISS (Keep It Sweet & Simple) principle | Place an Open File option on a menu, under File tag |
| Structure | Are the elements set out in a meaningful way from the perspective of the user? | Group information within a dialogue box. |
| Consistency | How easy is it to learn and remember the appearance, positioning and behavior of the elements? | X to close a window is always on top right hand side of the window; the most important buttons are the same size with only labels indicating different goals. |
| Tolerance | Prevents user making errors or provides easy recovery or graceful fail | Ignoring of wrong or invalid keyboard input; Hiding options inappropriate in a context. |

Source: The Humane Interface, Raskin, J., (2000)

In the e-CRM applications, user-centered design (UCD) is a crucial concept. It is a modern, widely practiced design philosophy rooted in the idea that users must take center-stage in the design of any computer system. Raskin’s (2000) approach is a seminal study that summarizes the dimensions of a successful interface comprehensively. Great use of this study has been made creating the HCI scale to measure interface success.

The issue of Web site design is the major theme in HCI literature. Therefore, a lot of attention must be directed to the studies analyzing aspects of good design. Designing a Web site is defined as the arrangement and creation of Web pages that in turn make up a Web site. In the literature for typical commercial Web sites, the basic aspects are:

- The content, which is the material of the site, has informational value for the site and for the customers.
- The appearance, which brings attractiveness to the site, is the look of styles, aesthetics and professional appearance of the pages.
- The usability, which means how easy user interfaces are the use, is related with navigation of the site, compatibility and reliability of dynamic functions.
- The visibility, which means the Web site appear in the first or leading places within the major search engines, can be used as a measure of how much the customer sees the Web site.

In the literature, many studies point out the general features that a successful Web site must have. An aggregated list of these features can be provided as follows:

- Correct, relevant and trustable content
- Easy navigation
- Clear and correct language
- Updated frequently with new information
- Giving information about company
- Ease of use and user-friendliness
- Contact information
- Consistency imagery in the pages

- Fewer step process
- Aesthetics
- Carry web traffic well
- Working links
- Security and reliability
- Having help option
- Responsiveness
- Accessibility from search engines
- Appropriate domain name
- Registration feature
- Interactivity
- Personalization

Performance Measures-Metrics

Performance metrics are specific measures designed to evaluate the effectiveness and efficiency of an organization's operations and measure whether the company has reached its objectives or not.

Sivakumar (2002) categorizes the metrics from the customer-centric, business centric and technology-centric viewpoints. The customer-centric viewpoint assesses what a customer expects when interacting with an e- CRM system for example convenience, ease of use, privacy and security, friendly technology. The business- centric metrics assess whether the technology is applicable to the firm, and understand the potential of a technology or protocol for example reliable operation, support for multiple users, and encryption of communication. The technology

centric metrics enable e-CRM and its adoption by an organization for effective interaction with the customer for example; the architecture of e-CRM systems, communication channels, the infrastructure or technology deals with the hardware/firmware components.

Some of the performance metrics examples are: return on investment (ROI), financial performance, market share, cost savings, revenues, customer satisfaction, customer lifetime value (LTV) etc. The Balanced Scorecard (BSC) is also a widely used performance measurement tool. Although it has been used extensively to measure overall business performance in the traditional context, it can also serve as a good framework for understanding e-marketing metrics.

Balanced Scorecard (BSC)

Kaplan and Norton, two Harvard Business School professors in 1990, introduced the Balanced Scorecard (BSC) as a concept for measuring a company's activities in terms of its vision and strategies, to give managers a comprehensive view of the performance of a business. It is a performance measurement tool, and can be used to measure and manage e-business project success.

The balanced scorecard drives implementation of strategy using four perspectives:

1. Customer Perspective
2. Internal Business Perspective
3. Innovation and Learning Perspectives.
4. Financial Perspective

The measures on a BSC can be utilized as the keystone of a management system that communicates strategy aligns individuals and team to the strategy, creates long-term strategic targets, allocates long and short-term resources and in the end provides feedback and learning about the strategy (Kaplan and Norton, 1996).

In the literature, for building a generic e-business scorecard, performance measures described in Van Grembergen and Saull (2001), Rosemann (2001) and Chaffey, Mayer, Johnston, and Ellis-Chadwick (2000) are integrated in these four perspectives. Moreover, each organization can choose metrics for the scope of these four perspectives based on its objectives, business model, strategies, and industry.

Customer Perspective

The customer perspective represents the evaluation of the consumer and business clients. It uses measures of the value delivered to customers. Customer metrics fall into four areas: time, quality, performance and service, and cost. In addition to these, this perspective measures customer loyalty and lifetime value. Some loyalty measures for e-businesses are length of visits, conversation rate of candidate customers to real customers, percentages who give personal information, etc. Furthermore, in customer perspective; transactions are another important measures for example online sales abandoned, time to respond to a customer or solution of a complaint, percentages of orders filled on time, etc. (Strauss, El-Ansary, and Frost, 2003)

Plant, Willcocks, and Olson (2003) carried out a research study, which examines the formulation of e-business measurement, in the United States and Europe. After a detailed work, they added four additional factors, namely: Brand,

Service, Market and Technology. These factors can be used as value criteria for customer perspective of BSC. Brand valuation can facilitate goal determination of customer perspective. Service factor helps to achieve and understand online customer perspective. Market positioning helps to do there tasks defining market, segmenting that market and then providing quality product or service according to those segments. Finally, technology perspective facilitates the organization's ability to utilize and employ technology effectively.

Internal Business Perspective

The internal business perspective evaluates company success at meeting customer expectations through its internal processes. This perspective is critical for a successful e-business. Web site is a measure for internal business perspective with its features like time to load a web page and scalability, ease of fulfillment order process, availability of help or support systems, and security and safety.

Supply chain excellence is another measure with inventory levels, order confirmation time, percentage of products built to order. Complementary channels measures evaluate percentages of total revenue generated online by the help of powerful software within information technology.

Innovation and Learning Perspective

The innovation and learning perspective (called growth perspective) measures the company's learning curve by continuous improvement to existing products and services, and by continues innovations in new products. Because of the

rapid change in technology, organizations have to evaluate themselves according to this perspective. Some innovation and learning perspective measures are number of new service products to market in a year, percent of sales from new services, number of employee suggestions, etc.

Financial Perspective

The financial performance of an organization is fundamental to its success. However, e-business projects are generally technically driven. Porter (2001) and Willcocks and Plant, 2002 state that for many of the “dot com” companies founded and progress in the late 1990’s, business perspective was neglected and the consequences were frequently serious. Therefore, in a balanced scorecard, the business perspective must be considered very important.

The main objective in financial perspective is cost reduction of the organization. Cost reduction of acquiring a new customer, operational cost reduction and cost reduction of promotional material are some measures that explain how the Web sites help to reduce costs. (Van Grembergen and Amelinckx, 2002)

Financial measures looks income and expense metrics such as return on investment (ROI), annual sales, market share growth, average order value and net profits as percentage of sales, operational costs and promotional costs.

CHAPTER 3

THEORETICAL MODEL AND HYPOTHESES

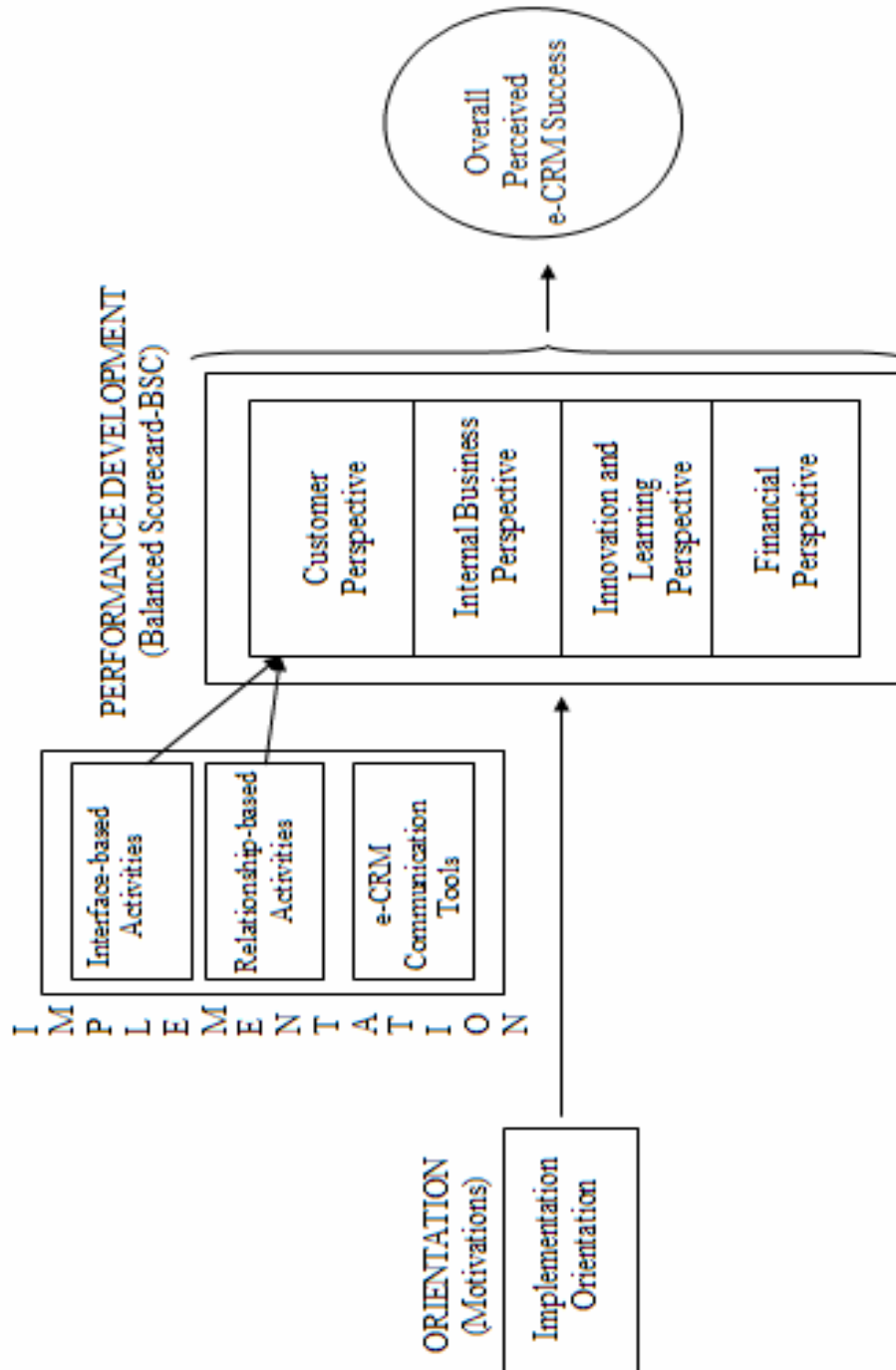


Figure 3.1 – Theoretical Model

In this part of the study, the theoretical model of the study, which contains a comprehensive collection of variables that are expected to influence the adoption and implementation of customer relationship management (CRM) activities in Internet businesses in Turkey, is explained component by component.

Module 1: Implementation Orientation for CRM

This module includes the six motivations for CRM implementation.

Karakostas et al. (2005) categorize organizations' main drive for making a CRM implementation into four as:

- *Competitors*: This means the company implements CRM applications because of their competitors' implementation in order to catch a competitive advantage.
- *Cost reduction*: This means the company implements CRM applications in order to reduce cost.
- *Internal efficiency*: This means the company implements CRM applications in order to increase internal efficiency in the organization.
- *Customer satisfaction*: This means the company implements CRM applications in order to improve and increase customer satisfaction.

In the theoretical model developed in this study, two additional dimensions are contributed. It is thought that companies can pursue implementing e-CRM applications in order to keep up with the latest business trends as well as increasing profitability. Thus, the additional dimensions are:

- *Innovation and continuous development*: This means the company implements CRM applications in order to keep up innovativeness and continuous process improvement mission.
- *Financial advantages*: This means company implements CRM applications in order to create financial gains for the company.

Motivations for CRM implementation have an important place in the model of this study and they show the companies' priority for implementing CRM applications in their organization. Their priority effects the organization's implementation way and activities.

Module 2: Implementation for CRM

This model includes two sets of implementation activities for CRM. Although, in the literature, there are many CRM activities cited to be important, they have not been categorized according to context. In this study, initially, a long list of CRM activities has been created and then they have been categorized according to their application context as "Interface- based activities" and "Relationship-based activities".

Interface- Based Activities

Interface-based activities are generally based on the Human Computer Interaction (HCI) concept. As mentioned in the literature, Human computer interaction (HCI) is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use. HCI improves

interaction between users and computers, provides and improves customer satisfaction, and makes customers loyal.

In this part of the model, a 23-item HCI scale has been constructed to measure the success application for each of the following dimensions in the HCI of Internet businesses in Turkey according to the titles listed below:

- Content and layout of the page
- Navigation
- User-friendliness and ease of use
- Processes(2-3 clicks to any solution)
- Aesthetic
- Traffic (ability to handle peak load times) & fast page loads
- Security
- Quick response
- Accessibility from search engines
- Appropriate and easily remembered domain names
- Clear and simple language
- Up-to-dateness
- Personalization
- Interactivity
- Contact

As will be explained later on in the Analyses and Findings section, these dimensions have been factor analyzed and reduced to the following six groups:

- Ease of Use and Navigation
- Access to the Site and Functionality
- Technical Capability

- Personalization and Interactivity
- Security Precautions and Problem Solution
- Perceived Usage Barriers of The Site

While the statistical details of the analysis can be found in the relevant section, it is necessary to present this categorization here to clarify Figure 3.2 where the model after the Factor analysis is presented.

Relationship- Based Activities

Relationship-based activities are generally related with the CRM activities supported by the companies to maintain the loyalty of customers after they engage in a commercial relationship with the company. Such CRM activities are very crucial to obtain customer satisfaction and loyalty. In this part of the model, a relationship-based activity scale has been constructed according to the titles listed below:

- necessity for registration
- sending SMS/call/e-mail for special days
- making discount for special days
- 24-hour online support
- offering various contact information
- obtaining secure process ending
- one-to-one solutions in short time
- follow-up processes/steps from Internet
- inform customers about new campaign/services by SMS
- customer recognition
- various payment alternatives

- personal e-mail/SMS/promotion
- offering campaigns to customer groups
- offering advantages according to general usage
- offering new suggestions according to buying behaviors
- offering online consultancy
- offering special web designs for customers
- Personalization of the site
- Giving advantage/discounts according to loyalty/previous usage
- Various security options
- Informing customers by e-mail/SMS, etc.

As will be explained later on in the Analyses and Findings section, these dimensions have been factor analyzed and reduced to the following 7 groups:

- Benefits Offered According to Past Behavior
- Payment Benefits and One-to-One Solutions
- Personalized Web Design and Advantageous Offers
- Online Guidance and Help
- Online Support and Information
- Process Ease and Security
- Customer Recognition and Security

The frequency and effectiveness of the relationship-based activities are expected to influence the customer-based performance measures for e-CRM.

Module 3: CRM Communication Channels and Tools

There are different Internet tools applied in the context of e-CRM, which facilitate companies to provide the best customer service, as a result enhancing customer relationships. Finding the existence of the tools for Web sites is very important point in e-CRM, thus this part is very critical in the model.

There are various communication tools for CRM in the literature. Romano et al. (2003) mark 20 different technologies that could be used for e-CRM within the context of three types of relationship management (passive, active, and interactive). In this study, the existence of fourteen different channels is examined. These are listed in Table 3.1.

Table 3.1 – E-CRM Communication Channels

| | |
|------------------------------------|---------------------------|
| 1. Postal addresses | 8. E-mail list |
| 2. E-mail | 9. Newsgroups |
| 3. Telephone | 10. Forums |
| 4. Fax number | 11. Online meeting/help |
| 5. FAQ | 12. Voice message system |
| 6. Message/request/complaint forms | 13. Video conference |
| 7. Chat room | 14. Electronic conference |

Module 4: Performance Development – Balanced Scorecard (BSC)

BSC, which is a performance measurement tool, provides a good framework for understanding e-marketing metrics and could be used to evaluate e-businesses' success. The balanced scorecard has four dimensions as mentioned in the literature review. These are Customer Perspective, Internal Business Perspective, Innovation and Learning Perspective and Financial Perspective. The Balanced Scorecard is a commonly used and acceptable performance measure, thus in this study, it is used to measure the perceived success of the company in terms of e-CRM. Generally, e-businesses are evaluated according to the Customer Perspective with:

- length of visits,
- number of new customers,
- percentages who give personal information,
- amount of transactions,
- effective customer databases, etc.

One of the perspectives taken in this study was that, in order to measure CRM success in an organization properly, the other 3 dimensions of BSC could also be used. Thus, the relationship between all few perspectives of BSC and other modules are measured and investigated.

Module 5: Overall Perceived CRM Success

The overall perceived success of the company is evaluated according to participants' answers to two questions. To begin with the first question, customer satisfaction, internal efficiency, technology and innovation, and finally financial performance are four main dimensions of CRM application to an organization.

These dimensions are relevant with the balanced scorecard's four perspectives. Our aim in this question is to understand the correlation between the motivation for CRM implementation and these four dimensions' efficiency.

A general perception of participant about CRM applications success in the organization is asked in the last part of survey with a multiple-choice question. The participants' perception is very crucial for this study because they are in the organization and they know the needs, lacks and requirement of their organization. Thus, they know why they use CRM, the pros and cons of using CRM applications, these applications' advantages, etc.

Hypotheses

This exploratory study aims to find the relationship between:

- Motivations for CRM implementation and overall perceived CRM success
- Interface-based CRM activities and Balanced Scorecard Customer Perspective
- Relationship-based CRM activities and Balanced Scorecard Customer Perspective
- BSC Customer Perspective and overall Perceived CRM success
- BSC Internal Business Perspective and overall perceived CRM success
- BSC Innovation and Learning Perspective and overall perceived CRM success
- BSC Financial Perspective and overall perceived CRM success

- BSC Customer Perspective and recoded perceived CRM success
- BSC Internal Business Perspective and recoded perceived CRM success
- BSC Innovation and Learning Perspective and recoded perceived CRM success
- BSC Financial Perspective and recoded perceived CRM success

Hypothesis 1: There is a correlation between Internet companies' orientations for implementing a CRM system and the perceived success dimensions of CRM activities.

Hypothesis 2: There is a correlation between the utilization of interface-based activities of companies for CRM purposes and their performance in customer-based measurement metrics.

Hypothesis 3: There is a correlation between the utilization of relationship-based activities of companies for CRM purposes and their performance in customer-based measurement metrics.

Hypothesis 4: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system's positive outcomes about customer relations and satisfaction.

Hypothesis 5: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system's positive outcomes about internal business efficiency.

Hypothesis 6: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system's positive outcomes about improvements in innovation and learning environment in the company.

Hypothesis 7: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system's positive outcomes about financial measures.

Hypothesis 8: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to customer-based performance measures of CRM.

Hypothesis 9: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to internal business efficiency-based performance measures of CRM.

Hypothesis 10: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to innovation and learning-based performance measures of CRM.

Hypothesis 11: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to financial performance measures of CRM.

CHAPTER 4

RESEARCH METHODOLOGY

This chapter describes the technical details of the survey designed for this study. Important issues such as preparation of the questionnaire, the method and procedure of data collection; the pilot questionnaire, the final questionnaire, variables and their measurement constructs, sampling practices and data analysis approach will be covered. Our research constraints will also be clearly stated in this chapter.

Preparation of the Questionnaire

The main goal of the survey designed for this study is to gather customer relationship management application users' perceptions concerning several factors in the scope of adoption and implementation of CRM activities in Internet businesses in Turkey.

The subject is a very new, lush and under-researched issue about Internet businesses in Turkey. Therefore, after completing a comprehensive literature survey, and expert opinion interviews, the first pilot version of the questionnaire was developed.

The Method and Procedure of Data Collection

The data collection method used for this study is a “disclosed and structured questionnaire”. By “disclosed” we mean that the subject and the purpose of the research have been stated at the introductory note which given to the participants.

Moreover, it was a structured questionnaire because a standard survey was applied to all respondents.

There is no established directory for Turkish Internet businesses, thus we made an extensive research in the Internet and decided about the sectors and companies that we can send the questionnaire to. The questionnaire was distributed online to different companies from different sectors such as e-commerce, banking, airlines and travel and cargo companies. It was mailed generally to the customer services or information technology departments of the companies and one response was taken from each company. The cover letter explained how to access the questionnaire both in Microsoft Excel format and on the web according to preference. Two weeks after the mailing, follow-up mailings were used to remind people to complete the survey and surveys were remailed if requested. Two weeks after reminding mailings, telephone calls were made. Nearly 450 surveys were sent and the number of returned ones was 82 with a response rate of 18 percent.

As the questionnaire asked major company demographics, CRM motivations and company strategy, the participants needed to have knowledge about these concepts. Indeed, this was a big handicap for this study because to find a person who was knowledgeable about the company's specific information like annual sales, orientation implementation of CRM systems, competitive strategy and performance of the firm was very difficult. Furthermore, organizational structures of firms vary company to company. CRM studies are under different departments, thus to find the right department and take the answered questionnaire was very hard and tiring.

In addition, some of the companies expressed that they were not able to answer the questionnaire. There were a few reasons for this:

- Not having any CRM application was the first reason for some of the companies. They did not answer the questionnaire because answering the questionnaire was not significant for this study.
- Using inadequate and ineffective CRM applications was another reason. The respondents expressed that their systems are not well enough and when they answered the questionnaire their company can be seen as a technologically laggard company.
- Some of the respondents clarified that their companies are working on improvements in CRM systems and applications. The development process had not finished yet so they did not want to answer the survey.
- Another reason was that the company had a policy not to give away any information about their internal functions, strategies and systems. Thus, they did not join the study and answer any question.

The Pilot Questionnaire

This pilot questionnaire developed for this research has been designed in six parts:

- Part 1 – Firm/ Company Demographics
- Part 2 – Acquisition Type and Motivations for CRM Implementation
- Part 3 – Human Computer Interaction Related Questions
- Part 4 – Relationship-based Activities Related Questions and CRM Communication Channels and Tools

- Part 5 – BSC-CRM Performance Metrics and Overall Success of the Company
- Part 6 - Style of CRM Applications

The questionnaire was conducted on 20 people as one person from each company. After the statistical results of these initial surveys in SPSS, the pilot questionnaire was restructured and some parts and some questions were omitted.

The Final Questionnaire

The final questionnaire consists of six pages including the cover page where an introductory note is addressed to the participants. As assessed from the pilot study, the average response time is approximately 15 minutes.

After restructuring the pilot questionnaire, the final questionnaire was developed for this research and has been designed in seven parts with fewer questions than the pilot study:

- Part 1 – Firm/ Company Demographics
- Part 2 – Acquisition Type and Motivations for CRM Implementation
- Part 3 – Interface-based Activities Related Questions
- Part 4 – Relationship-based Activities Related Questions
- Part 5 – CRM Communication Channels and Tools
- Part 6 – BSC-CRM Performance Metrics
- Part 7 – Perceived Overall Success of the Company

Variables and Their Measurement Constructs

The first part of the study includes eight questions about firm/company demographics:

- The sector of the company,
- The year of giving services from Internet,
- The number of working staff in Internet businesses,
- Customer number in Internet,
- Market share of the company,
- Scale of the company,
- Annual revenue gained from Internet,
- Participants' position in the company.

The second part includes two main questions. First one is a multiple-choice question, which aims to understand the CRM acquisition method of the company. The second question aims to understand motivations for CRM implementation. It has six items and is measured with a 4-point interval scale ranging from (1) Not Influential At All to (4) Very Influential.

The questionnaire items related to the variables in this second part are indicated in Table 4.1.

The third part of the questionnaire contains 23 questions, which are related with Interface- based questions, has 4-point interval scale ranging from (1) Strongly Disagree to (4) Strongly Agree.

The questionnaire items related to the variables in this third part are indicated in Table 4.2.

Table 4.1 – Variables in Acquisition and Motivation Part and
Their Measurement Constructs

| Variable and Measurement Construct | Method |
|---|-------------------------|
| <u>CRM acquisition method of the company</u> | |
| 1. There is no CRM system in our company. | Multiple-choice |
| 2. We developed our CRM system in-house. | |
| 3. We purchased it from a system provider. | |
| 4. We purchased it from a system provider and adapted it to our company. | |
| 5. Other | |
| <u>Motivations for CRM Implementation</u> | |
| 1. The fact that CRM activities have been adopted by most competitors. | 4-point Likert scale |
| 2. The fact that implementing CRM activities will result in cost reduction. | |
| 3. The fact that implementing CRM activities will increase internal efficiency in the company. | |
| 4. The fact that implementing CRM activities will increase customer satisfaction. | |
| 5. The fact that implementing CRM activities are required in our field in order to keep up our innovativeness and continuous process improvement mission. | |
| 6. The fact that implementing CRM activities will create financial gains for the company. | |

The fourth part of the survey contains 21 questions. This questions aims to understand the frequency of Relationship-based CRM activities with a 4-point interval scale ranging from (1) Never to (4) Always.

The questionnaire items related to the variables in this fourth part are indicated in Table 4.3.

The fifth part of the questionnaire, which aims to understand used CRM communication tools in the companies' website, has 14 items and participants selects the existing ones in their companies' sites.

The questionnaire items related to the variables in this fifth part are indicated in Table 4.4.

Table 4.2 – Variables in Interface-based Activities and
Their Measurement Constructs

| Variable and Measurement Construct | Method |
|--|-------------------------|
| <i>Interface-based Activities</i> | |
| 1. Our site includes all relevant content about the products/services that we offer. | |
| 2. The information about our products/services is presented in an easily accessible style. | |
| 3. In our site, even a first time user can easily complete his/her work. | |
| 4. Our site has been designed in style that offers easy navigation within the site. | |
| 5. Our site has an aesthetic and interesting design. | |
| 6. Our users have rapid access to our site and can complete their tasks quickly within the site on fast-loading pages. | |
| 7. Our site has a technological infrastructure, which supports traffic at busy times. | |
| 8. It is necessary to be a good computer user to use our site. | |
| 9. Users can complete many tasks with a minimum number of steps on our site. | |
| 10. All links on the site work in a correct and proper way. | 4-point Likert scale |
| 11. Various security precautions are used during transactions on our site. | |
| 12. Better security systems should be used on our site. | |
| 13. On our site, questions and help requests are answered very quickly. | |
| 14. It is easy to access our site from other sites and search engines. | |
| 15. Our site has an appropriate domain name. | |
| 16. Our site has a domain name that is easy to keep in memory. | |
| 17. Our site has a simple and understandable language | |
| 18. Our site is often updated. | |
| 19. Our site can be personalized. | |
| 20. On our site, an efficient customer registration system is used. | |
| 21. Our site gets located in prior results in major search engines. | |
| 22. Our site works properly in all browsers (Internet Explorer, Mozilla Firefox, etc.). | |
| 23. Our site has "interactive" elements that enhance communication between the company and the user. | |

Table 4.3 – Variables in Relationship-based Activities and
Their Measurement Constructs

| Variable and Measurement Construct | Method |
|--|----------------------|
| <i>Relationship-based Activities</i> | |
| 1. Recognizing customers who enter the site. | |
| 2. Sending SMS/e-mails or giving calls on special days (birthdays, Mother's day, Valentines day, etc.) | |
| 3. Making discounts to customers on special days (birthdays, Mother's day, Valentines day, etc.) | |
| 4. Offering campaigns appropriate to customer groups | |
| 5. Sending personal SMS/e-mail or making personal promotions to customers | |
| 6. Making offers to customers according to previous usage and preferences | |
| 7. Offering various payment alternatives (credit card, money order, etc.) to customers | |
| 8. Providing 24-hour online support to customers | |
| 9. Necessity of customers' registration | |
| 10. Offering free services according to the degree of customer loyalty/profitability | 4-point Likert scale |
| 11. Making suggestions to customers-based on their predicted buying behavior | |
| 12. Offering the opportunity to personalize the site | |
| 13. Providing special gains for customers according to the type and frequency of services they use (gaining extra money/discounts, etc.) | |
| 14. Ensuring process endings in security | |
| 15. Offering various security options (SMS approval, password provider, etc.) | |
| 16. Producing one-to-one solutions in a short time in case of customer complaint | |
| 17. Offering the opportunity for customers to follow their orders/services/activities online | |
| 18. Offering various contact information about the company on the site | |
| 19. Offering online consultancy and guidance to the customers on the site | |
| 20. Informing customers about new campaigns and services by e-mail | |
| 21. Informing customers about new campaigns and services by SMS | |

Table 4.4 – Variables in CRM Communication Tools in the Companies’ Web Site Part and their Measurement Constructs

| Variable and Measurement Construct | Method |
|--------------------------------------|-----------------|
| <i>CRM Communication Tools</i> | |
| 1. postal address | |
| 2. e-mail address | |
| 3. telephone number | |
| 4. fax number | |
| 5. Frequently Asked Questions (FAQs) | |
| 6. message/request/complaint forms | |
| 7. chat rooms | Multiple-choice |
| 8. mail lists | |
| 9. newsgroups | |
| 10. forum | |
| 11. online meeting/support | |
| 12. voice message system | |
| 13. video conferencing | |
| 14. electronic conference | |

The sixth part of the questionnaire contains four sections. These sections are measured with a 4-point interval scale ranging from (1) Not Obvious At All to (4) Very Obvious. The first section is asked to measure the BSC’s customer perspective and contains 24 items. The second question is asked to measure the BSC’s internal business perspective with the eight items. The third question is asked to measure the BSC’s innovation and learning perspective and contains two items. Finally, the fourth section is asked to measure the BSC’s financial perspective with the eight items.

The questionnaire items related to the variables in this part are indicated in Table 4.5.

Table 4.5 – Variables in BSC Perspectives and their Measurement Constructs

| Variable and Measurement Construct | Method |
|---|--------------|
| <i>BSC Customer Perspective</i> | |
| 1. The recognition of our company/brand in the online environment has increased. | |
| 2. The reliability of our company/brand in the online environment has increased. | |
| 3. The perception of our company as a high-tech/innovative brand has improved. | |
| 4. The pre-sale services offered to customers were strengthened. | |
| 5. The support offered to customers during the selling process is strengthened. | |
| 6. The post-sale services offered to customers were strengthened. | |
| 7. The total customer number has increased. | |
| 8. The number of newly acquired customers has increased. | |
| 9. The customer acquisition cost has decreased. | |
| 10. The ratio of reuse/repurchase of services offered on the site has increased. | |
| 11. The reacquisition of lost customers has increased. | 4-point |
| 12. The process of service completion/delivery is shortened. | Likert scale |
| 13. Effective customer databases have been created. | |
| 14. The contribution to the correct determination of target markets has increased. | |
| 15. The databases are more effectively used to develop various marketing methods and strategies. | |
| 16. Customer satisfaction has increased. | |
| 17. Customer transaction frequency has increased. | |
| 18. Customer transaction amount has increased. | |
| 19. The usage rate of processes/services provided on the site has increased. | |
| 20. The time customers spend on the site has increased. | |
| 21. Conveying complaints to the related people have become easier and accelerated. | |
| 22. The ratio of the solutions provided to the complaints of customers has improved. | |
| 23. The willingness of customers to provide extra information (questionnaires, etc.) has increased. | |
| 24. The usage of help/support systems on the site has increased. | |

Table 4.5 – Variables in BSC Perspectives and their Measurement Constructs

(Continued)

| Variable and Measurement Construct | Method |
|--|----------------------|
| <i><u>BSC Internal Businesses Perspective</u></i> | |
| 1. The usage of technology in the company has increased and improved. | |
| 2. The quality of help/support systems on the site has increased. | |
| 3. The variety of help/support systems (e-mail, online consultancy, etc.) on the site has increased. | |
| 4. The frequency of updating used software has increased. | |
| 5. The usage ratio of new technology compared to competitors has increased. | 4-point Likert scale |
| 6. The business processes in the organization have speeded up and become more effective. | |
| 7. The security of business processes in the organization has increased. | |
| 8. The content management of the site has improved. | |
| <i><u>BSC Innovation and Learning Perspective</u></i> | |
| 1. The present services are continuously developed and renewed. | 4-point Likert scale |
| 2. The ratio of developing new services has increased. | |
| <i><u>BSC Financial Perspective</u></i> | |
| 1. The contribution of online services/sales to the profitability of the company has increased. | |
| 2. The contribution of online products to the protection/development of market share has increased. | |
| 3. Operational costs have decreased. | |
| 4. Promotional costs (printing and delivery cost, etc.) have decreased. | |
| 5. Customer support systems' costs (FAQs, online help, online user groups, etc.) have decreased. | 4-point Likert scale |
| 6. The annual sales gained from the loyal customers have increased. | |
| 7. The number of profitable customers has increased. | |
| 8. Customer life-time value has increased. | |

The seventh part of the questionnaire aims to evaluate perceived CRM success of the company by asking two questions. First one aims to evaluate the CRM applications according to the percentages given for the four main reasons of

CRM motivations. In the second question, participants are asked to evaluate their organizations' success of using CRM applications with a multiple-choice question.

The questionnaire items related to the variables in this third part are indicated in Table 4.6.

Table 4.6 – Variables in Perceived Success of CRM Applications and their Measurement Constructs

| Variable and Measurement Construct | Method |
|--|-----------------|
| <u><i>Dimensions about CRM Applications</i></u> | |
| 1. Customer satisfaction | percentage |
| 2. Internal efficiency | |
| 3. Technology and innovation | |
| 4. Financial performance | |
| <u><i>Perception about CRM Success Level</i></u> | |
| 1. Very successful | Multiple-choice |
| 2. Quite successful | |
| 3. Partially successful | |
| 4. Not very successful | |
| 5. Unsuccessful | |

The original form of the questionnaire used in the field has been provided in appendices A and B with Turkish and English versions.

Sampling

In this research, the population comprised of all businesses in Turkey who do business via the Internet. It is quite difficult to determine the exact number in this population. There is no established directory for Turkish Internet businesses, thus we

made an extensive research in the Internet and decided about the sectors and companies that we can send the questionnaire to.

Since there is no exact sampling frame, instead of probability sampling, convenience and judgment sampling was used in this study. Convenience sampling is the method of choosing items arbitrarily and in an unstructured manner from the frame and judgment sampling, the researcher or some other "expert" uses his/her judgment in selecting the units from the population for study based on the population's parameters.

To continue with the sampling units, this study was conducted on individuals who represented their company, as this was a company-based research. One respondent from a company was adequate for the evaluation. The respondents had to have specific information about their companies' point of view about customer relationship management, CRM applications and strategy and performance metrics.

Data Analysis Approach

After collecting the answered questionnaires, collected data was entered to SPSS for further statistical analysis. The following analyses were applied to the data groups:

- Descriptive analyses, which compute some statistics such as mean, standard deviation, are done for demographic profile of the companies, acquisition of CRM systems, motivations for CRM implementation, interface-based activities and relationship-based activities, CRM communication tools, 4 dimensions of BSC and overall perceived CRM success of the company.

- Factor analyses are done for interface-based and relationship-based activities and BSC's four dimensions in order to find components / items, which can be grouped together. Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. This analysis is often used in data reduction to identify a small number of factors that explain most of the variance that is observed in a much larger number of manifest variables.
- Correlation analyses are done in order to measure how variables are related between implementation orientation and overall perceived CRM success, between motivations for CRM application and BSC 4 perspectives separately, between interface-based activities factors and BSC customer perspective factors and between relationship-based activities factors and BSC customer perspective factors.
- Regression analyses are done to construct the mathematical formulas for dependent variables success dimensions of CRM with BSC 4 perspectives (customer, internal business, innovation and learning and financial) factors separately as independent variables. Furthermore, dependent variables BSC customer perspective with interface-based and relationship-based factors as independent variables separately.
- ANOVA analyses are done between BSC 4 Perspectives and Recoded Perceived CRM Success in order to determine which means differ and make differences exist among the others.

CHAPTER 5
ANALYSES AND FINDINGS

Descriptive Analyses

Demographic Profile

Sector of the Company

In this study, the Internet businesses are categorized into nine main sectors:

- E-commerce
- Banking
- Airlines and transportation companies
- GSM Operators
- Cargo Company
- Insurance and retirement companies
- Internet Service Provider (ISP) companies
- Vacation and tourism companies
- Other

The questionnaire was delivered to nearly 450 Internet businesses and the number of returned ones was 81 with the response rate of 18 percent.

37.0% of the total respondents were e-commerce companies. “Other” category was following e-commerce companies with a percentage of 21.0%. 14.8% of the total respondents were banks. In the banking sector, “Internet banking” is becoming very important day by day. Users, generally living in big cities, prefer doing business via Internet and beginning to use Internet banking. The percentage of

airlines and transportation companies were 6.2%. Insurance and retirement and Internet service provider (ISP) companies both answered the questionnaire with a percentage of 4.9%. GSM operators, cargo companies and vacation-tour companies answered the questionnaire with the same percentage of 3.7%.

Table 5.1 – Sector of Companies

| Sector of Companies | Frequency | Percentage (%) |
|--------------------------------|-----------|----------------|
| E-Commerce | 30 | 37,0 |
| Banking | 12 | 14,8 |
| Airlines & Transportation | 5 | 6,2 |
| GSM Operators | 3 | 3,7 |
| Cargo Company | 3 | 3,7 |
| Insurance& Retirement | 4 | 4,9 |
| Internet Service Provider(ISP) | 4 | 4,9 |
| Vacation-Tour Company | 3 | 3,7 |
| Others | 17 | 21,0 |

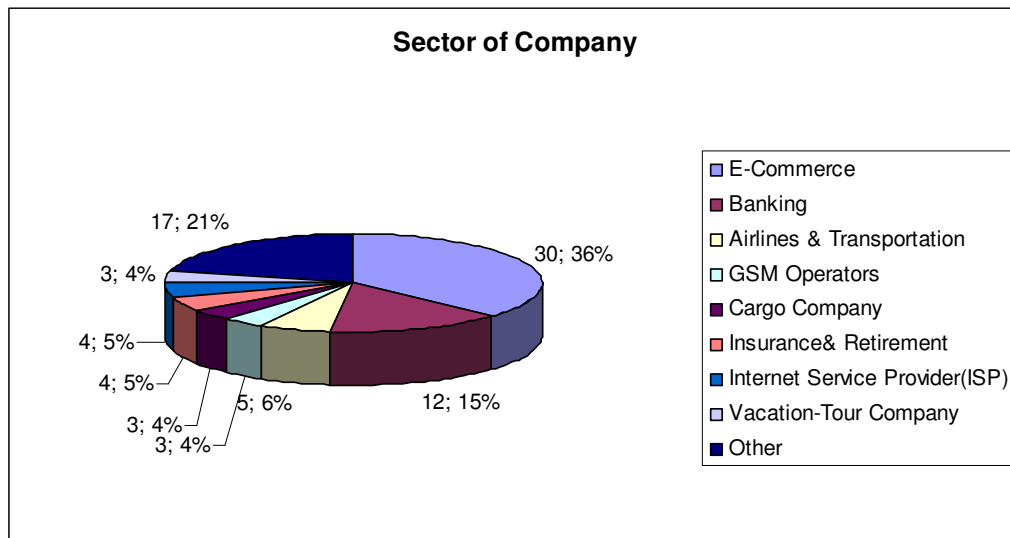


Figure 5.1 – Distribution of respondent companies according to sector

The Figure 5.1 summarizes Table 5.1 and shows the distribution of Internet businesses according to their working sector.

Year of Activity in Internet

The result about the year of activity in Internet shows that 58.0% of the total cases have been using the Internet for more than 5 years. 21.0% of the total respondents have been using Internet for less than 2 years. 77.6% of the total cases have an Internet usage history of longer than 2 years.

Table 5.2 – Year of Activity

| Year of Activity | Frequency | Percentage (%) |
|-------------------|-----------|----------------|
| 0-1 year | 17 | 21.0 |
| 2-3 years | 7 | 8.6 |
| 4-5 years | 9 | 11.1 |
| more than 5 years | 47 | 58.0 |
| Missing | 1 | 1.2 |

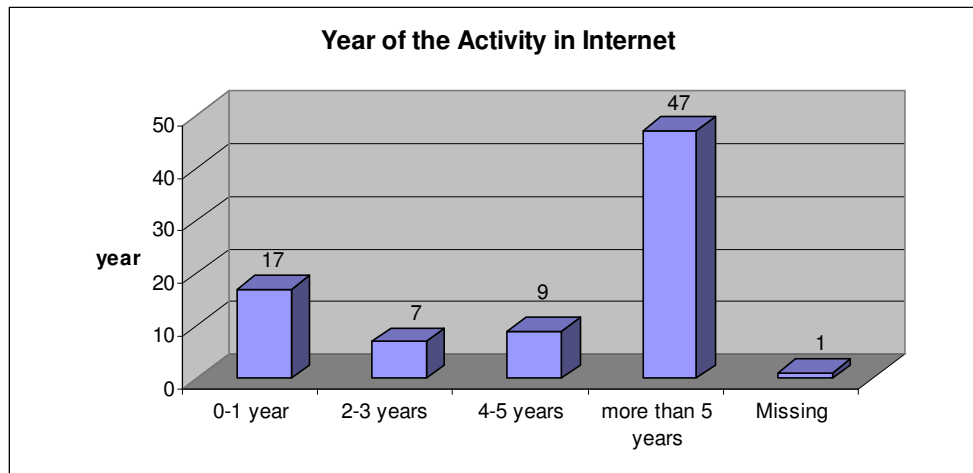


Figure 5.2 – Distribution of year of activity in Internet

The Figure 5.2 summarizes Table 5.2 and shows the distribution of year of the companies' activity in Internet businesses.

Number of Working People in the Company

Since the CRM applications are executed in different departments in the companies, it is more difficult to decide the exact number of working people in Internet era of the companies in the study. The question means the number of people who work in CRM department or information technology department that relates with CRM applications. 48.1% of the cases show that less than 11 people are working in jobs about CRM systems. 30.9% of the cases have a percentage of working people between 11 and 50. Others have a total percentage of 20.9%.

Table 5.3 Number of Working People in the CRM-Related Functions
of the Company

| | Frequency | Percentage (%) |
|---------------|-----------|----------------|
| 0 – 10 | 39 | 48.1 |
| 11 – 50 | 25 | 30.9 |
| 51 – 100 | 4 | 4.9 |
| more than 100 | 10 | 12.3 |
| Missing | 3 | 3.7 |

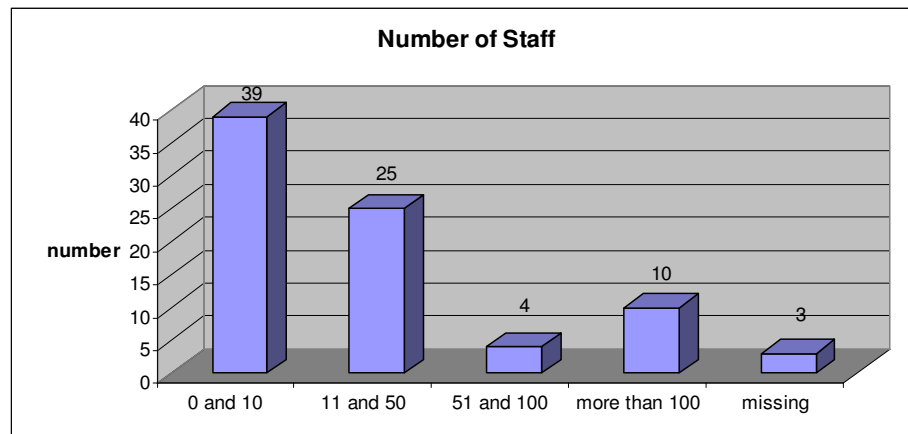


Figure 5.3 – Distribution of number of working people in CRM systems

The Figure 5.3 summarizes Table 5.3 and shows the distribution of year of the companies' activity in Internet businesses.

Customer Number in Internet

In the questionnaire, the approximate number of customers in Internet was asked and 60 respondents over 81 answered this question. The frequency of this answer varies from 30 to 25000000 customers. The Table C.1 which shows respondents' answers is put at the back into the Appendix C of this thesis study.

Market Share of the Company

In the questionnaire company's market share in Internet was asked and 52 respondents over 81 answered this question. The frequencies of these answers vary from 1 to 90. The Table C.2 which shows respondents' answers is put at the back into the Appendix C of this thesis study.

Size of the Company

There are three scales for the size of the company; small, medium and large scale companies. In this study, all three scales have similar values. 29.6% of the companies are small-scaled enterprises, 28.4% of the companies are medium-scaled enterprises and 25.9% of the companies are large-scaled companies. 16.0% of the respondents did not answer this question.

Table 5.4 - Size of the Company

| | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| Small scale enterprise | 24 | 29.6 |
| Medium scale enterprise | 23 | 28.4 |
| Large scale enterprise | 21 | 25.9 |
| Missing | 13 | 16.0 |

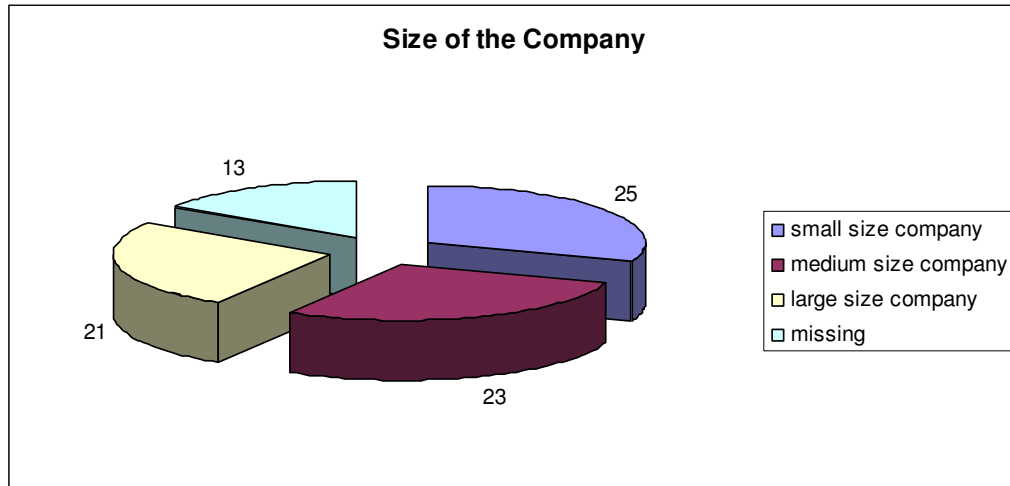


Figure 5.4 – Distribution of size of the companies

The Figure 5.4 summarizes Table 5.4 and shows the distribution of size of the companies in Internet businesses.

Respondent's Position in the Company

In the questionnaire, respondents' position in the company was asked and all 82 respondents answered this question. Generally the following positions are stated in the questionnaire:

- Analysts
- CRM experts
- IT specialists
- Sales/Marketing specialists
- Projects managers
- Software specialists

Acquisition and Motivation of CRM Systems

Acquisition of CRM Systems

The results about the CRM systems' acquisition type show that 60.5% of the total cases have developed their systems in-house. 17.3% of the total respondents have purchased it from a system provider and adapted it for the company. 11.1% of the total cases have no CRM systems they perform CRM-related activities only over their web sites. 2.5% of the respondents stated that they purchased their system from a system provider.

Table 5.5- Acquisition of CRM Systems

| | Frequency | Percentage (%) |
|--|-----------|----------------|
| There is no CRM system in our company | 9 | 11.1 |
| We developed our CRM system in-house | 49 | 60.5 |
| We purchased it from a system provider | 2 | 2.5 |
| We purchased it from a system provider and adapted it to our company | 14 | 17.3 |
| Other | 2 | 2.5 |
| Missing | 5 | 6.2 |

Motivation for CRM Implementation

The result about this question shows that the most important driver for CRM implementation of companies is customer satisfaction with the score of 3.80 over 4. The second driver is innovation and learning, it has a score of 3.65 over 4. The third driver is internal efficiency with the score of 3.43 over 4. The others are financial advantage with the score 3.12, followed by cost reduction with the score 3.05 and finally competitors with the score of 2.50 over 4.

Karakostas' (2005) empirical investigation on UK financial services shows that customer satisfaction is the most prominent motivation among these followed by internal efficiency, competitors and cost reduction respectively. Our questionnaire results are similar to Karakostas' (2005) study. Both studies show that most important motivation for CRM implementation is customer satisfaction and it is followed by internal efficiency.

In our study, there are two additional dimensions to Karakostas' (2005) study. The innovation and learning dimension was stated as the second important driver, whereas the other one, "financial advantage" was stated as the fourth important driver for Turkish Internet businesses.

Table 5.6- Means of Motivations for CRM Implementations

| Variable | Mean (over 4) | Std. Deviation |
|-----------------------|---------------|----------------|
| Customer Satisfaction | 3.80 | 0.52 |
| Innovation & Learning | 3.65 | 0.64 |
| Internal Efficiency | 3.43 | 0.84 |
| Financial Advantage | 3.12 | 0.85 |
| Cost Reduction | 3.05 | 0.95 |
| Competitors | 2.50 | 1.05 |

Interface-Based Activities

In the questionnaire, respondents were asked to state their agreement level for the 23 statements, which are related with Interface- based activities about CRM applications. There was a 4-point interval scale ranging from (1) Strongly Disagree to (4) Strongly Agree. Table 5.7 shows the means of these Interface-based activities.

According to the means, the most commonly used Interface-based activity is having a domain name that is easy to keep in memory with the score of 3.63 over 4. The second one is having simple and understandable language in the Web site with

the score of 3.60 over 4. These are followed by having an appropriate domain name to their company name with the score 3.54 over 4. Updating the site very often and using various security precautions in their site have the same score with the value 3.53 over 4. Generally technology related activities are in the upper parts of the activity list.

Table 5.7- Means of Interface-based Activities

| Variable | Mean (over 4) | Std. Deviation |
|---|------------------|-------------------|
| Our site has a domain name that is easy to keep in memory | 3.63 | 0.60 |
| Our site has a simple and understandable language. | 3.60 | 0.59 |
| Our site has an appropriate domain name. | 3.54 | 0.74 |
| Our site is often updated. | 3.53 | 0.73 |
| Various security precautions are used during transactions on our site | 3.49 | 0.62 |
| All links on the site work in a correct and proper way. | 3.46 | 0.65 |
| The information about our products/services is presented in an easily accessible style. | 3.42 | 0.57 |
| It is easy to access our site from other sites and search engines. | 3.41 | 0.67 |
| In our site, even a first time user can easily complete his/her work. | 3.36 | 0.58 |
| On our site, questions and help requests are answered very quickly. | 3.35 | 0.64 |
| Our site has been designed in style that offers easy navigation within the site. | 3.33 | 0.59 |
| Our site has a technological infrastructure, which supports traffic at busy times. | 3.29 | 0.64 |
| Our site includes all relevant content about the products/services that we offer. | 3.28 | 0.67 |
| Users can complete many tasks with a minimum number of steps on our site. | 3.27 | 0.47 |
| On our site, an efficient customer registration system is used. | 3.26 | 0.75 |
| Our users have rapid access to our site and can complete their tasks quickly within the site on fast-loading pages. | 3.22 | 0.68 |
| Our site has an aesthetic and interesting design. | 3.20 | 0.80 |
| Our site works properly in all browsers (Internet Explorer, Mozilla Firefox, etc.). | 3.19 | 0.74 |
| Our site gets located in prior results in major search engines. | 3.09 | 0.94 |
| Our site has "interactive" elements that enhance communication between the company and the user. | 3.04 | 0.84 |
| Better security systems should be used on our site. | 2.63 | 0.93 |
| Our site can be personalized. | 2.55 | 1.05 |
| It is necessary to be a good computer user to use our site. | 1.99 | 0.75 |

Necessity of being a good computer user to use the site is the least agreed activity on the list with a score 1.99 over 4. The second least agreed activity is supporting personalized Web sites with the score 2.55 over 4. And the third least agreed activity is the necessity of better security systems with the score of 2.63 over 4.

The means of interface-based activities show that generally technology related topics such as domain name, up-to-dateness, and security are stated in the prior places but personalization and interactivity issues are stated relatively less and in the final places.

Relationship-Based Activities

In the questionnaire, respondents were asked to state their application frequency of the 21 CRM activities/methods, which are related with Interface- based activities. There was a 4-point interval scale ranging from (1) Never to (4) Always. Table 5.8 shows the means of these relationship-based activities.

According to the means, the most commonly used relationship-based activity is offering various contact information about the company in the site with the score of 3.70 over 4. The second one is ensuring process endings in security with the score of 3.47 over 4. These are followed by producing one--to-one solutions in a short time in case of customer complaints with the score 3.42 over 4. Informing customers about new campaigns and services by e-mail has a score of 3.25 over 4. In addition, offering the opportunity for customers to follow their orders/ services/ activities online follow them with the score 3.24 over 4. Generally technology related activities are in upper parts of the activity list.

Table 5.8- Means of Relationship-based Activities

| Variable | Mean (over 4) | Std. Deviation |
|--|------------------|-------------------|
| Offering various contact information about the company on the site | 3.70 | 0.66 |
| Ensuring process endings in security | 3.47 | 0.86 |
| Producing one-to-one solutions in a short time in case of customer complaint | 3.42 | 0.69 |
| Informing customers about new campaigns and services by e-mail | 3.25 | 0.91 |
| Offering the opportunity for customers to follow their orders/services/activities online | 3.24 | 1.00 |
| Offering various payment alternatives (credit card, money order, etc.) to customers | 3.00 | 1.18 |
| Recognizing customers who enter the site. | 2.86 | 1.16 |
| Necessity of customers' registration | 2.85 | 1.20 |
| Sending SMS/e-mails or giving calls on special days (birthdays, Mother's day, Valentines day, etc.) | 2.76 | 1.16 |
| Sending personal SMS/e-mail or making personal promotions to customers | 2.68 | 0.99 |
| Offering campaigns appropriate to customer groups | 2.64 | 1.03 |
| Informing customers about new campaigns and services by SMS | 2.53 | 1.21 |
| Providing 24-hour online support to customers | 2.51 | 1.22 |
| Making offers to customers according to previous usage and preferences | 2.49 | 1.12 |
| Providing special gains for customers according to the type and frequency of services they use (gaining extra money/discounts, etc.) | 2.48 | 1.08 |
| Offering various security options (SMS approval, password provider, etc.) | 2.44 | 1.25 |
| Making suggestions to customers-based on their predicted buying behavior | 2.37 | 1.04 |
| Offering online consultancy and guidance to the customers on the site | 2.34 | 1.22 |
| Offering free services according to the degree of customer loyalty/profitability | 2.24 | 1.08 |
| Making discounts to customers on special days (birthdays, Mother's day, Valentines day, etc.) | 2.13 | 1.07 |
| Offering the opportunity to personalize the site | 1.67 | 1.06 |

Offering customers the opportunity to personalize the site is the least supported feature of the activity list with the score 1.67 over 4. The second least supported activity is making discounts to the customers for special days (birthdays,

mothers' day, St. Valentine's days, etc.) with the score 2.13. And the third least supported activity in the list is offering free services according to the degree of customer loyalty/profitability with the score of 2.24 over 4.

CRM Communication Tools

In this study, respondents were asked to state the e-CRM communication channels which take part in their Web site. E-mail got the highest existence score with a 98.8%. Only 1 respondent stated that they have no e-mail contact in their site. Postal address follow e-mail with a percentage of 96.3%, and then telephone number comes with the percentage of 95.1%. Furthermore, fax number and message/request/complaint forms come after these three common communication tools with the percentages in turn in order 86.4% and 82.7%.

Table 5.9 – CRM Communication Tools

| CRM Tools | Exists | Percentage % | Doesn't Exist | Percentage % |
|-----------------------------------|--------|--------------|---------------|--------------|
| postal address | 78 | 96.3 | 3 | 3.7 |
| e-mail | 80 | 98.8 | 1 | 1.2 |
| telephone number | 77 | 95.1 | 4 | 4.9 |
| Fax number | 70 | 86.4 | 11 | 13.6 |
| Frequently Asked Questions (FAQs) | 52 | 64.2 | 29 | 35.8 |
| message/request/complaint forms | 67 | 82.7 | 14 | 17.3 |
| chat rooms | 5 | 6.2 | 76 | 93.8 |
| mail lists | 25 | 30.9 | 56 | 69.1 |
| Newsgroups | 12 | 14.8 | 69 | 85.2 |
| Forum | 8 | 9.9 | 73 | 90.1 |
| online meeting/support | 23 | 28.4 | 58 | 71.6 |
| voice message system | 7 | 8.6 | 74 | 91.4 |
| video conferencing | 0 | 0 | 81 | 100 |
| electronic conference | 0 | 0 | 81 | 100 |

Electronic conferencing and video conference are the least used communication tools. Actually, none of the respondents' stated that they have these tools in their Web site. Thus, their existence percentage is 0%. Other least stated communication channels are voice message systems and chat rooms with the percentages of 8.6% and 6.2% respectively.

In summary, as it can be seen from the Table 5.9, the most commonly used communication tools in Internet businesses in Turkey are e-mail, postal address and telephone number. These tools' existence percentages are very high. However, video conferencing and electronic conference existence percentages are 0% as these are not used by any of the respondents. These communication tools need infrastructure and high technology, thus this means it is a new an investment area for the company so companies currently do not prefer these tools.

Performance Measurement Tools

BSC Customer Perspective

In the questionnaire, respondents were asked to state the benefit level for the company in terms of the 24 criteria about CRM applications' customer-based performance metrics. According to the means, the most commonly mentioned criterion is "customer satisfaction has increased" with the score of 3.50 over 4. The second one is "effective customer databases have been created" with the score of 3.47 over 4. These are followed by "the recognition of our company/brand in the online environment has increased" with the score 3.43 over 4. Finally, "the total customer number has increased" has the same score with a 3.43 over 4.

“The reacquisition of lost customers has increased” is the least preferred criterion with a score of 2.55. “The willingness of customers to provide extra information (questionnaires, etc.) has increased” is the second least chosen factor with a score of 2.81. “The usage of help/support systems in the site has increased” is the third least important variable with the score of 2.96.

Table 5.10 – Means of BSC Customer Perspective

| Variable | Mean (over 4) | Std. Deviation |
|---|------------------|-------------------|
| The customer satisfaction has increased. | 3.50 | 0.68 |
| Effective customer databases have been created. | 3.47 | 0.71 |
| The recognition of our company/brand in the online environment has increased. | 3.43 | 0.75 |
| The total customer number has increased. | 3.43 | 0.68 |
| The reliability of our company/brand in the online environment has increased. | 3.39 | 0.67 |
| Conveying complaints to the related people have become easier and accelerated. | 3.36 | 0.80 |
| The customer transaction amount has increased. | 3.33 | 0.74 |
| The customer transaction frequency has increased. | 3.33 | 0.76 |
| The perception of our company as a high-tech/innovative brand has improved. | 3.33 | 0.76 |
| The post-sale services offered to customers were strengthened. | 3.32 | 0.86 |
| The ratio of the solutions provided to the complaints of customers has improved. | 3.28 | 0.88 |
| The usage rate of processes/services provided on the site has increased. | 3.25 | 0.74 |
| The support offered to customers during the selling process is strengthened | 3.24 | 0.78 |
| The number of newly acquired customers has increased. | 3.23 | 0.90 |
| The ratio of reuse/repurchase of services offered on the site has increased. | 3.22 | 0.85 |
| The process of service completion/delivery is shortened. | 3.22 | 0.83 |
| The contribution to the correct determination of target markets has increased. | 3.15 | 0.83 |
| The time customers spend on the site has increased. | 3.15 | 0.77 |
| The pre-sale services offered to customers were strengthened. | 3.14 | 0.85 |
| The time period of customers in the site was increased. | 3.08 | 0.82 |
| The databases are more effectively used to develop various marketing methods and strategies. | 3.06 | 0.98 |
| The usage of help/support systems on the site has increased. | 2.96 | 0.95 |
| The willingness of customers to provide extra information (questionnaires, etc.) has increased. | 2.81 | 0.92 |
| The reacquisition of lost customers has increased. | 2.55 | 0.94 |

BSC Internal Businesses Perspective

In the questionnaire, respondents were asked to state the benefit level for the company in terms of the 8 criteria about CRM applications' internal businesses-based performance metrics. According to the means, the most commonly mentioned factor is “the usage of technology in the company has increased and improved” with the score of 3.74 over 4. The second one is “the quality of help/support systems in the site has increased” with the score of 3.63 over 4. These are followed by “the variety of help/support systems (e-mail, online consultancy, etc.) on the site has increased” with the score 3.58 over 4.

Table 5.11 – Means of BSC Internal Businesses Perspective

| Variable | Mean (over 4) | Std. Deviation |
|---|---------------|----------------|
| The usage of technology in the company has increased and improved. | 3.74 | 2.65 |
| The quality of help/support systems on the site has increased. | 3.63 | 3.23 |
| The variety of help/support systems (e-mail, online consultancy, etc.) on the site has increased. | 3.58 | 3.25 |
| The frequency of updating used software has increased. | 3.41 | 1.63 |
| The business processes in the organization have speeded up and become more effective. | 3.35 | 0.76 |
| The usage ratio of new technology compared to competitors has increased | 3.18 | 0.83 |
| The security of business processes in the organization has increased. | 3.17 | 0.88 |
| The content management of the site has improved. | 3.15 | 0.93 |

“The content management of the site has improved” is the least preferred criterion with a score of 3.15. “The security of business processes in the organization has increased” has the lowest least score with 3.17 over 4. “The usage ratio of new technology compared to competitors has increased” has the third lowest score of 3.18 over 4.

BSC Innovation and Learning Perspective

In the questionnaire, respondents were asked to state the benefit level for the company in terms of the two criteria about CRM applications' innovation and learning-based performance metrics. According to the means, "the present services are continuously developed and renewed" item has a score of 3.44 over 4. The other item; "the ratio of developing new services was increased" has a score of 3.41 over 4. These two variables' mean values are very similar.

Table 5.12 – Means of BSC Innovation and Learning Perspective

| Variable | Mean (over 4) | Std. Deviation |
|--|------------------|-------------------|
| The present services are continuously developed and renewed. | 3.44 | 0.73 |
| The ratio of developing new services has increased. | 3.41 | 0.74 |

BSC Financial Perspective

In the questionnaire, respondents were asked to state the benefit level for the company in terms of the 8 criteria about CRM applications' financial-based performance metrics. According to the means, the most commonly mentioned factor is "the contribution of online products to the protection/development of market share has increased" with the score of 3.25 over 4. The second one is "the contribution of online services/sales to the profitability of the company has increased" with the score of 3.21 over 4. These are followed by "operational costs has decreased" with the score 3.06 over 4.

"The number of profitable customers has increased" is the least preferred criterion with a score of 2.97. "Customer life-time value has increased" has the second least value with a score of 3.00 over 4. "The annual sales gained from the

loyal customers have increased and promotional costs (printing and delivery cost, etc.) have decreased” have the same score of 3.01 over 4.

Table 5.13 – Means of BSC Financial Perspective

| Variable | Mean (over 4) | Std. Deviation |
|--|---------------|----------------|
| The contribution of online products to the protection/development of market share has increased. | 3.25 | 0.92 |
| The contribution of online services/sales to the profitability of the company has increased. | 3.21 | 0.97 |
| Operational costs have decreased. | 3.06 | 0.93 |
| Customer support systems' costs (FAQs, online help, online user groups, etc.) have decreased. | 3.03 | 0.96 |
| Promotional costs (printing and delivery cost, etc.) have decreased. | 3.01 | 0.92 |
| The annual sales gained from the loyal customers have increased. | 3.01 | 0.99 |
| Customer life-time value has increased. | 3.00 | 0.95 |
| The number of profitable customers has increased. | 2.97 | 0.96 |

Dimensions of CRM Application

Table 5.14 – Means of Dimensions of CRM Application

| Variable | Mean (over 100) | Std. Deviation |
|---------------------------|-----------------|----------------|
| Customer satisfaction | 36.77 | 14.41 |
| Internal efficiency | 22.80 | 13.99 |
| Technology and innovation | 22.14 | 10.43 |
| Financial performance | 18.17 | 11.46 |

In this study, respondents were asked to state the functional level for each dimension about CRM applications by giving them percentages over 100 points. Customer satisfaction is the most prominent one with a score of 36.77 over 100. The second one is internal efficiency with a score of 22.80 over 100. The third one is Technology and Innovation with a score of 22.14 and the last one is financial performance with a score of 18.17.

Perceived Success of the CRM Systems' Performance

Table 5.15 – Frequency of Perceived Success

| | Frequency | Percentage (%) |
|----------------------|-----------|----------------|
| Very Successful | 13 | 16.0 |
| Quite Successful | 38 | 46,9 |
| Partially Successful | 20 | 24.7 |
| Not Very Successful | 3 | 3,7 |
| Unsuccessful | 0 | 0 |
| Missing | 7 | 8,6 |

16.0% of respondents stated that CRM applications in their company are “very successful”. “Quite successful” is the most preferred answer for this question with a percentage of 46.9%. The percentage of respondents who marked “partially successful” is 24.7%. 3.7% of respondents declared that their company’s performance is “not very successful”. Nobody stated that their performance is “unsuccessful”.

BSC Descriptive

Table 5.16 – Means of BSC Descriptive

| Variable | Mean (over 4) | Std. Deviation |
|---|------------------|-------------------|
| BSC Internal Business Perspective | 3.50 | 2.08 |
| BSC Innovation and Learning Perspective | 3.43 | 0.69 |
| BSC Customer Perspective | 3.23 | 0.51 |
| BSC Financial Perspective | 3.07 | 0.69 |

In this study, when we examine the means of motivations for CRM implementation, it is seen that the first reason to implement CRM in the company is customer satisfaction. The second reason is innovation and learning and the third reason is internal efficiency. Financial advantage, cost reduction and competitors follow these respectively.

At the end of the study, it is realized that the internal business perspective, thus internal efficiency, has the highest score of means among others with a value of 3.50 over 4. This means that CRM is more beneficial to companies than to customers. By using CRM systems firm's internal efficiency increases obviously. As innovation and learning is in the second order in both tables and financial advantage is at the end of both tables, the priority order of these perspectives' means is consistent with the final means of BSC descriptive. In Table 5.16, the means and standard deviation of these means are shown.

Scale Reliabilities

Scale about Motivations for CRM Implementation

A 6-item scale was used to measure the main motivations for CRM Implementation in the organizations. Cronbach's Alpha was found as .706. This value is accepted as consistent and reliable since it is larger than .70.

Scale about Interface-Based Activities

The scale about interface-based activities was formed after an extensive literature review. A 23-item scale was used in this study. Cronbach's Alpha was found as .874. This value is accepted as consistent and reliable since it is larger than .70.

Scale about Relationship-Based Activities

The scale about relationship-based activities was formed after an extensive literature review. A 21-item scale was used in this study. Cronbach's Alpha was found as .820. This value is accepted as consistent and reliable since it is larger than .70.

Scale about BSC Customer Perspective

A 24-item scale was used to measure the reliability of BSC customer perspective. Cronbach's Alpha was found as .927. This value is accepted as consistent and reliable since it is larger than .70.

Scale about BSC Internal Businesses Perspective

An 8-item scale was used to measure the reliability of BSC internal businesses perspective. Cronbach's Alpha was found as .857. This value is accepted as consistent and reliable since it is larger than .70.

Scale about BSC Innovation and Learning Perspective

A 2-item scale was used. This is not a multi item scale but as all other perspectives are measured, this perspective was also tested for reliability. Cronbach's Alpha was found as .877. This value is accepted as consistent and reliable since it is larger than .70.

Scale about BSC Financial Perspective

An 8-item scale was used to measure the reliability of BSC financial perspective. Cronbach's Alpha was found as .874. This value is accepted as consistent and reliable since it is larger than .70.

Factor Analyses

In this study, there are many variables in the questionnaire. Measuring and evaluating all these variables is difficult. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance that is observed in a much larger number of manifest variables. Therefore, we made factor analyses with main six parts of the questionnaire and used them to make decisions for analytical purposes.

Factor Analysis of Interface-Based Activities

Sampling Adequacy

The optimal number of subsets for adequacy is between 3 to 5 times of the number of the items. The number of the items in Interface-based activities is 23, and the total number of cases is 81. The ratio of total number of cases to the number of CSF items is 3.52, which means that it is sufficient for factor analysis.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is .779 which is very acceptable level since it is over .5. Bartlett's Test of Sphericity is .00 which is again a very acceptable level since it is under .10.

Total Variance Explained

The total variance explained is 67.06% with 6 components. This is a satisfying result since it is over 60% level.

Factor Solution of Interface-based Activities

Table 5.17 – Factor Solution with the Items Loaded

| | Component | % of variance explained by component | Cumulative % of variance explained | Items loaded under component |
|---|---|--------------------------------------|------------------------------------|------------------------------|
| 1 | Ease of Use and Navigation | 34.54 | 34.54 | 1, 2, 3, 4, 17 |
| 2 | Access to the Site and Functionality | 8.79 | 43.33 | 5, 14, 15, 16, 18, 21, 22 |
| 3 | Technical Capability | 6.81 | 50.14 | 6, 7, 9, 10 |
| 4 | Personalization and Interactivity | 6.37 | 56.52 | 19, 20, 23 |
| 5 | Security Precautions and Problem Solution | 6.00 | 62.52 | 11, 13 |
| 6 | Perceived Usage Barriers of the Site | 4.54 | 67.06 | 8, 12 |

Varimax rotation is used for factor solution.

Mean of Each Factor

Table 5.18 –Means of Factor Components of Interface-based Activity

Components in Order

| Component Number | Component Name | Mean (over 4) | Std. Deviation |
|------------------|---|---------------|----------------|
| 5 | Security Precautions and Problem Solution | 3.43 | 0.50 |
| 1 | Ease of Use and Navigation | 3.39 | 0.49 |
| 2 | Access to the Site and Functionality | 3.37 | 0.53 |
| 3 | Technical Capability | 3.31 | 0.46 |
| 4 | Personalization and Interactivity | 2.95 | 0.72 |
| 6 | Perceived Usage Barriers of the Site | 2.29 | 0.69 |

Factor 1: Ease of Use and Navigation consists of the following items:

- Our site includes all relevant content about the products/services that we offer.
- The information about our products/services is presented in an easily accessible style.
- In our site, even a first time user can easily complete his/her work.
- Our site has been designed in style that offers easy navigation within the site.
- Our site has a simple and understandable language.

The mean of Factor 1 is 3.39 over 4. It is the first factor in the factor analysis with an explanation power of 34.54% of variance.

Factor 2: Access to the Site and Functionality consists of the following items:

- Our site has an aesthetic and interesting design.
- It is easy to access our site from other sites and search engines.
- Our site has an appropriate domain name.
- Our site has a domain name that is easy to keep in memory.
- Our site is often updated.
- Our site gets located in prior results in major search engines.
- Our site works properly in all browsers (Internet Explorer, Mozilla Firefox, etc.).

The mean of Factor 2 is 3.37 over 4. It is the second factor in the factor analysis with an explanation power of 8.79% of variance.

Factor 3: Technical Capability consists of the following items:

- Our users have rapid access to our site and can complete their tasks quickly within the sites on fast-loading pages.
- Our site has a technological infrastructure which supports traffic at busy times.
- Users can complete many tasks with a minimum number of steps on our site.
- All links on the site work in a correct and proper way.

The mean of Factor 3 is 3.31 over 4. It is the third factor in the factor analysis with an explanation power of 6.81% of variance.

Factor 4: Personalization and Interactivity consists of the following items:

- Our site can be personalized.
- In our site, an efficient customer registration system is used.
- Our site has "interactive" elements that enhance communication between the company and the user.

The mean of Factor 4 is 2.95 over 4. It is the fourth factor in the factor analysis with an explanation power of 6.37% of variance.

Factor 5: Security Precautions and Problem Solution consists of the following items:

- Various security precautions are used during transactions on our site.
- On our site, questions and help requests are answered very quickly.

The mean of Factor 5 is 3.43 over 4. It is the fifth factor in the factor analysis with an explanation power of 6.00% of variance.

Factor 6: Perceived Usage Barriers of the Site consists of the following items:

- It is necessary to be a good computer user to use our site.
- Better security systems should be used on our site.

The mean of Factor 6 is 2.29 over 4. It is the sixth factor in the factor analysis with an explanation power of 4.54% of variance.

Factor Analysis of Relationship-Based Activities

Sampling Adequacy

The number of the items in relationship-based activities is 21, and the total number of cases is 81. The ratio of total number of cases to the number of items is 3.86, which means that this case is sufficient for factor analysis.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is .714 which is very acceptable level since it is over .5. Bartlett's Test of Sphericity is .00 which is again a very acceptable level since it is under .10.

Total Variance Explained

The total variance explained is 71.47% with 7 components. This is a satisfying result since it is over 60% level.

Factor Solution of Relationship-based Activities

Table 5.19 – Factor Solution with the Items Loaded

| | Component | % of variance explained by component | Cumulative % of variance explained | Items loaded under component |
|---|---|--------------------------------------|------------------------------------|------------------------------|
| 1 | Benefits Offered According to Past Behavior | 25.24 | 25.24 | 2, 3, 4, 5, 6, 11 |
| 2 | Payment Benefits and One-to-One Solutions | 13.90 | 39.15 | 7, 10, 16 |
| 3 | Personalized Web Design and Advantageous Offers | 8.96 | 48.10 | 12, 13 |
| 4 | Online Guidance and Help | 6.86 | 54.96 | 17, 19, 20 |
| 5 | Online Support and Information | 6.24 | 61.21 | 8, 21, 18 |
| 6 | Process Ease and Security | 5.41 | 66.61 | 9, 14 |
| 7 | Customer Recognition and Security | 4.86 | 71.47 | 1, 15 |

Varimax rotation is used for factor solution.

Mean of Each Factor

Table 5.20 –Means of Factor Components of Relationship-based Activity
Components in Order

| Component Number | Component Name | Mean (over 4) | Std. Deviation |
|------------------|---|---------------|----------------|
| 6 | Process Ease and Security | 3.14 | 0.88 |
| 4 | Online Guidance and Help | 2.94 | 0.77 |
| 2 | Payment Benefits and One-to-One Solutions | 2.92 | 0.66 |
| 7 | Customer Recognition and Security | 2.88 | 0.75 |
| 5 | Online Support and Information | 2.68 | 0.99 |
| 1 | Benefits Offered According to Past Behavior | 2.53 | 0.80 |
| 3 | Personalized Web Design and Advantageous Offers | 2.09 | 0.91 |

Factor 1: Benefits Offered According to Past Behavior consists of the following items:

- Sending SMS/e-mails or giving calls on special days (birthdays, Mother's day, Valentines day, etc.)

- Making discounts to customers on special days (birthdays, Mother's day, Valentines day, etc.)
- Offering campaigns appropriate to customer groups
- Sending personal SMS/e-mail or making personal promotions to customers
- Making offers to customers according to previous usage and preferences
- Making suggestions to customer-based on their predicted buying behavior

The mean of Factor 1 is 2.53 over 4. It is the first factor in the factor analysis with an explanation power of 25.24% of variance.

Factor 2: Payment Benefits and One-to-One Solutions consists of the following items:

- Offering various payment alternatives (credit card, money order, etc.) to customer
- Offering free services according to the degree of customer loyalty/profitability
- Producing one--to-one solutions in a short time in case of customer complaint

The mean of Factor 2 is 2.88 over 4. It is the second factor in the factor analysis with an explanation power of 13.90% of variance.

Factor 3: Personalized Web Design and Advantageous Offers consists of the following items:

- Offering the opportunity to personalize the site

- Providing special gains for customers according to the type and frequency of services they use (gaining extra money/discounts, etc.)

The mean of Factor 3 is 2.09 over 4. It is the third factor in the factor analysis with an explanation power of 8.96% of variance.

Factor 4: Online Guidance and Help consists of the following items:

- Offering the opportunity for customers to follow their orders/services/activities online
- Offering online consultancy and guidance to the customers on the site
- Informing customers about new campaigns and services by e-mail

The mean of Factor 4 is 2.94 over 4. It is the fourth factor in the factor analysis with an explanation power of 6.86% of variance.

Factor 5: Online Support and Information consists of the following items:

- Providing 24-hour online support to customers
- Informing customers about new campaigns and services by SMS
- Offering various contact information about the company on the site

The mean of Factor 5 is 2.53 over 4. It is the fifth factor in the factor analysis with an explanation power of 6.24% of variance.

Factor 6: Process Ease and Security consists of the following items:

- Necessity of customers' registration
- Ensuring process endings in security

The mean of Factor 6 is 3.21 over 4. It is the sixth factor in the factor analysis with an explanation power of 5.41% of variance.

Factor 7: Customer Recognition and Security consists of the following item:

- Recognizing customers who enter the site

- Offering various security options (SMS approval, password provider, etc.)

The mean of Factor 7 is 2.68 over 4. It is the seventh factor in the factor analysis with an explanation power of 4.86% of variance.

Factor Analysis of BSC Customer Perspective

Sampling Adequacy

The number of the items in balanced scorecard customer perspective is 24, and the total number of cases is 81. The ratio of total number of cases to the number of items is 3.38, which means that it is sufficient for factor analysis.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is .778 which is very acceptable level since it is over .5. Bartlett's Test of Sphericity is .00 which is again a very acceptable level since it is under .10.

Total Variance Explained

The total variance explained is 74.67% with 6 components. This is a satisfying result since it is over 60% level.

Factor Solution of BSC Customer Perspective

Table 5.21 – Factor Solution with the Items Loaded

| | Component | % of variance explained by component | Cumulative % of variance explained | Items loaded under component |
|---|---|--------------------------------------|------------------------------------|------------------------------|
| 1 | Number, Cost and Transaction Amount of Customers | 38.88 | 38.88 | 7, 8, 9, 10, 11, 18, 19, 20 |
| 2 | Customer Satisfaction and Problem Solving | 10.95 | 49.83 | 12, 13, 16, 17, 21, 22, 24 |
| 3 | Support Company/ Brand Recognition and Image | 8.01 | 57.84 | 1, 2, 3 |
| 4 | Sales Support Services | 6.80 | 64.63 | 4, 5, 6 |
| 5 | Determination of and Detailed Information about the Target Market | 5.57 | 70.20 | 14, 23 |
| 6 | Effective Customer Databases | 4.46 | 74.67 | 15 |

Varimax rotation is used for factor solution.

Mean of Each Factor

Table 5.22 –Means of Factor Components of BSC Customer Perspective

Components in Order

| Component Number | Component Name | Mean (over 4) | Std. Deviation |
|------------------|---|---------------|----------------|
| 3 | Support Company/ Brand Recognition and Image | 3.39 | 0.63 |
| 2 | Customer Satisfaction and Problem Solving | 3.31 | 0.64 |
| 4 | Sales Support Services | 3.24 | 0.75 |
| 1 | Number, Cost and Transaction Amount of Customers | 3.17 | 0.61 |
| 6 | Effective Customer Databases | 3.06 | 0.98 |
| 5 | Determination of and Detailed Information about the Target Market | 2.96 | 0.81 |

Factor 1: Number, Cost and Transaction Amount of Customers consists of the following items:

- The total customer number has increased.

- The number of newly acquired customers has increased.
- The customer acquisition cost has decreased.
- The ratio of reuse/repurchase of services offered on the site has increased.
- The reacquisition of lost customers has increased.
- Customer transaction amount has increased.
- The usage rate of processes/services provided on the site has increased.
- The time customers spend on the site has increased.

The mean of Factor 1 is 3.17 over 4. It is the first factor in the factor analysis with an explanation power of 38.88% of variance.

Factor 2: Customer Satisfaction and Problem Solving consists of the following items:

- The process of service completion/delivery is shortened.
- Effective customer databases have been created.
- Customer satisfaction has increased.
- Customer transaction frequency has increased.
- Conveying complaints to the related people have become easier and accelerated.
- The ratio of the solutions provided to the complaints of customers has improved.
- The usage of help/support systems on the site has increased.

The mean of Factor 2 is 3.31 over 4. It is the second factor in the factor analysis with an explanation power of 10.95% of variance.

Factor 3: Support Company/ Brand Recognition and Image consists of the following items:

- The recognition of our company/brand in the online environment has increased.
- The reliability of our company/brand in the online environment has increased.
- The perception of our company as a high-tech/innovative brand has improved.

The mean of Factor 3 is 3.39 over 4. It is the third factor in the factor analysis with an explanation power of 8.01% of variance.

Factor 4: Sales Support Services consists of the following items:

- The pre-sale services offered to customers were strengthened.
- The support offered to customers during the selling process is strengthened.
- The post-sale services offered to customers were strengthened.

The mean of Factor 4 is 3.24 over 4. It is the fourth factor in the factor analysis with an explanation power of 6.80% of variance.

Factor 5: Determination of and Detailed Information about the Target Market consists of the following items:

- The contribution to the correct determination of target markets has increased.
- The willingness of customers to provide extra information (questionnaires, etc.) has increased.

The mean of Factor 5 is 2.96 over 4. It is the fifth factor in the factor analysis with an explanation power of 5.57% of variance.

Factor 6: Effective Customer Databases consists of the following items:

- The databases are more effectively used to develop various marketing methods and strategies.

The mean of Factor 6 is 3.06 over 4. It is the sixth factor in the factor analysis with an explanation power of 4.46% of variance.

Factor Analysis of BSC Internal Businesses Perspective

Sampling Adequacy

There is a 3 to 5 rule for sampling adequacy to factor analysis. This is a limitation for doing factor analysis. The number of the items in internal businesses perspective is 8, and the total number of cases is 81. The ratio of total number of cases to the number of items is very sufficient for this analysis.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is .772 which is very acceptable level since it is over .5. Bartlett's Test of Sphericity is .00 which is again a very acceptable level since it is under .10.

Total Variance Explained

The total variance explained is 65.37% with 2 components. This is a satisfying result since it is over 60% level.

Factor Solution of BSC Internal Businesses Perspective

Table 5.23 – Factor Solution with the Items Loaded

| | Component | % of variance explained by component | Cumulative % of variance explained | Items loaded under component |
|---|--|--------------------------------------|------------------------------------|------------------------------|
| 1 | Help/Support Systems and Technology | 50.89 | 50.89 | 1, 2, 3, 4 |
| 2 | Security , Speed and Content of the Site | 14.48 | 65.37 | 5, 6, 7, 8 |

Varimax rotation is used for factor solution.

Mean of Each Factor

Table 5.24 –Means of Factor Components of BSC Internal Businesses Perspective
Components in Order

| Component Number | Component Name | Mean (over 4) | Std. Deviation |
|------------------|---|---------------|----------------|
| 1 | Help/Support Systems and Technology | 3.59 | 2.60 |
| 2 | Security, Speed and Content of the Site | 3.23 | 0.68 |

Factor 1: Help/Support Systems and Technology consists of the following items:

- The usage of technology in the company has increased and improved.
- The quality of help/support systems on the site has increased.
- The variety of help/support systems (e-mail, online consultancy, etc.) on the site has increased.
- The frequency of updating used software has increased.

The mean of Factor 1 is 3.59 over 4. It is the first factor in the factor analysis with an explanation power of 50.89% of variance.

Factor 2: Security, Speed and Content of the Site consists of the following items:

- The usage ratio of new technology compared to competitors has increased.
- The business processes in the organization have speeded up and become more effective.
- The security of business processes in the organization has increased.
- The content management of the site has improved.

The mean of Factor 2 is 3.23 over 4. It is the second factor in the factor analysis with an explanation power of 14.48% of variance.

Factor Analysis of BSC Financial Perspective

Sampling Adequacy

There is a 3 to 5 rule for sampling adequacy to factor analysis. This is a limitation for doing factor analysis. The number of the items in financial perspective is 8, and the total number of cases is 81. The ratio of total number of cases to the number of items is very sufficient for this analysis.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is .806 which is very acceptable level since it is over .5. Bartlett's Test of Sphericity is .00 which is again a very acceptable level since it is under .10.

Total Variance Explained

The total variance explained is 67.96% with 2 components. This is a satisfying result since it is over 60% level.

Factor Solution of BSC Financial Perspective

Table 5.25 – Factor Solution with the Items Loaded

| | Component | % of variance explained by component | Cumulative % of variance explained | Items loaded under component |
|---|--|--------------------------------------|------------------------------------|------------------------------|
| 1 | Improvement of Customer Profitability and Cost Reduction | 54.50 | 54.50 | 1, 2, 4, 5, 6, 7, 8 |
| 2 | Decreasing Operational Costs | 13.46 | 67.96 | 3 |

Varimax rotation is used for factor solution.

Mean of Each Factor

Table 5.26 –Means of Factor Components of BSC Financial Perspective

Components in Order

| Component Number | Component Name | Mean (over 4) | Std. Deviation |
|------------------|--|---------------|----------------|
| 1 | Improvement of Customer Profitability and Cost Reduction | 3.08 | 0.73 |
| 2 | Decreasing Operational Costs | 3.06 | 0.93 |

Factor 1: Improvement of Customer Profitability and Cost Reduction

consists of the following items:

- The contribution of online services/sales to the profitability of the company has increased.
- The contribution of online products to the protection/development of market share has increased.

- Promotional costs (printing and delivery cost, etc.) have decreased.
- Customer support systems' costs (FAQs, online help, online user groups, etc.) have decreased.
- The annual sales gained from the loyal customers have increased.
- The number of profitable customers has increased.
- Customer life-time value has increased.

The mean of Factor 1 is 3.08 over 4. It is the first factor in the factor analysis with an explanation power of 54.50% of variance.

Factor 2: Decreasing Operational Costs consists of the following items:

- Operational costs have decreased.

The mean of Factor 2 is 3.06 over 4. It is the second factor in the factor analysis with an explanation power of 13.46% of variance.

Table 5.27 shows the results of factor analyses, which includes theoretical model components and their factors.

Table 5.27 – Summary of Model Components’ Factors

After Factor Analyses

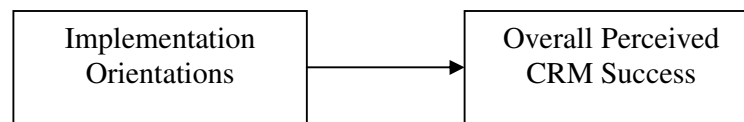
| Model Components | Components’ Factors |
|---|--|
| Interface-based Activities | <ul style="list-style-type: none"> • F1: Ease of Use and Navigation • F2: Access to the site and Functionality • F3: Technical Capability • F4: Personalization and Interactivity • F5: Security Precautions and Problem Solution • F6: Perceived Usage Barriers of the Site |
| Relationship-based Activities | <ul style="list-style-type: none"> • F1: Benefits Offered According to Past Behavior • F2: Payment Benefits and One-to-One Solutions • F3: Personalized Web design and Advantageous Offers • F4: Online Guidance and Help • F5: Process Support and Information • F6: Process ease and Security • F7: Customer Recognition and Security |
| BSC Customer Perspective | <ul style="list-style-type: none"> • F1: Number, Cost and Transaction Amount of Customers • F2: Customer Satisfaction and Problem Solving • F3: Support Company/ Brand Recognition and Image • F4: Sales Support Services • F5: Determination of and Detailed Information about the Target Market • F6: Effective Customer Databases |
| BSC Internal Business Perspective | <ul style="list-style-type: none"> • F1: Help/Support Systems and Technology • F2: Security, Speed and Content of the Site |
| BSC Innovation and Learning Perspective | * There is not any factor for this component. |
| BSC Financial Perspective | <ul style="list-style-type: none"> • F1: Improvement of Customer Profitability and Cost Reduction • F2: Decreasing Operational Costs |

Correlation Analyses

Motivations for CRM Application and Perceived Success Dimensions of CRM

Hypothesis 1: There is a correlation between Internet companies' orientation for implementing a CRM system and the perceived success of CRM activities.

For testing this hypothesis, a correlation analysis has been done between the importance levels attributed to 6 major CRM implementation orientations and 4 perceived success dimensions of CRM. Correlation analysis using Pearson correlation coefficients was applied on the research data in order to discover the relationship between these constructs based on the research framework.



Implementation Orientations

- Competitors
- Cost Reduction
- Internal Efficiency
- Customer Satisfaction
- Innovation and Learning
- Financial Advantage

Perceived Success Dimensions of CRM

- BSC Customer Perspective (mean value)
- BSC Internal Businesses Perspective (mean value)
- BSC Innovation and Learning Perspective (mean value)
- BSC Financial Perspective (mean value)

Table 5.28 shows the correlation between motivations for CRM application and 4 perceived success dimensions of CRM.

Table 5.28 – Correlations between Motivations for CRM Application and Perceived Success Dimensions of CRM

| | BSC Customer Perspective | BSC Internal Businesses Perspective | BSC Innovation and Learning Perspective | BSC Financial Perspective |
|--------------------------------|--------------------------|-------------------------------------|---|---------------------------|
| Competitors | | | | |
| Pearson Correlation | -.012 | -.043 | .150 | .116 |
| Sig. (2-tailed) | .921 | .724 | .223 | .350 |
| Cost Reduction | | | | |
| Pearson Correlation | .191 | -.080 | .131 | .356(**) |
| Sig. (2-tailed) | .105 | .504 | .284 | .003 |
| Internal Efficiency | | | | |
| Pearson Correlation | .192 | .153 | .253(*) | .200 |
| Sig. (2-tailed) | .104 | .199 | .036 | .100 |
| Customer Satisfaction | | | | |
| Pearson Correlation | .329(**) | .111 | .427(**) | .311(**) |
| Sig. (2-tailed) | .004 | .351 | .000 | .009 |
| Innovation and Learning | | | | |
| Pearson Correlation | .274(*) | .154 | .402(**) | .314(**) |
| Sig. (2-tailed) | .018 | .194 | .001 | .008 |
| Financial Advantage | | | | |
| Pearson Correlation | .315(**) | .060 | .371(**) | .459(**) |
| Sig. (2-tailed) | .007 | .615 | .002 | .000 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

The Table 5.28 shows that there is a significant positive correlation between:

- An Internet company’s orientation to implement a CRM system for “cost reduction” purposes and the “positive financial outcomes observed” out of implementing CRM.

This is logical since a company with a stronger tendency to reduce costs through CRM implementation will utilize the system accordingly and achieve higher levels of positive financial outcomes through cost reduction in the end.

- An Internet company’s orientation to implement a CRM system for “increasing internal efficiency” purposes and the “positive outcomes of company innovation and learning” out of implementing CRM.

Interestingly, companies that mention a greater emphasis on increasing internal efficiency as their major motivation to use/ implement a CRM system seem not to observe significantly positive outcomes in the internal business perspective of the balanced scorecard. On the other hand, their orientation toward using CRM to increase internal efficiency results in more positive outcomes in terms of company innovation and learning. Since company innovation and learning in a CRM context was measured mainly with a “continuous service development and renewal” approach, this might be considered related to internal efficiency.

- An Internet company’s orientation to implement a CRM system for “increasing customer satisfaction” purposes and the “positive outcomes observed in terms of customer, financial and company innovation and learning perspectives” out of implementing CRM.

Internet companies that have implemented CRM system mainly for the purpose of increasing customer satisfaction are found to experience positive outcomes in the “innovation and learning”, “customer” and “financial” perspectives of the BSC. This can easily be rationalized since customer satisfaction is improved with continuous development of new services as well as direct relationships with customers. Also, customer satisfaction creates retention and loyalty which produce improvements in financial measures as well.

- An Internet company’s orientation to implement a CRM system for “increasing innovation and learning” in a purposes and the “positive outcomes observed in terms of customer, financial and company innovation and learning perspectives” out of implementing CRM.

While implementing CRM is for increasing company innovation and learning is found to be positively correlated with the innovation and learning outcomes

according to BSC, which was expected, this implementation orientation is found to be correlated with financial and customer perspectives as well. This, again, might be rationalized by thinking that as a company improves its innovativeness and thus this will be reflected in financial measures as well.

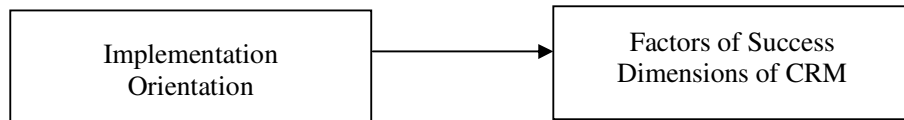
- An Internet company's orientation to implement a CRM system for "increasing financial advantages" in a company purposes and the "positive outcomes observed in terms of customer, financial and company innovation and learning perspectives" out of implementing CRM.

This is also very logical since a company aims reducing costs and gaining financial advantages through CRM implementation. By implementing a CRM system in an organization, it is expected to improve continuous development of new services and direct relationships with customers. These opportunities bring customer satisfaction, retention and loyalty which produce improvements in financial measures as well.

Hypothesis 1 is confirmed by the result of this set of correlation analysis since it is observed that there are a considerable number of significant correlations between tested variables. The majority of the implementation motivations for CRM applications in companies are positively correlated with the BSC partners. However, there is not any correlation between the competitor variable of implementation orientation and perceived CRM success dimensions of BSC. There is not any negative correlation between these two parts.

Motivations for CRM Application and BSC Perspectives

Although the relationships between implementation orientations of CRM and the mean values of the four BSC perspectives were investigated, the findings are preliminary and are not adequate to reach definitive conclusions. Since this part of the model is about the major contribution of the study (which is dimensionalizing CRM performance in a detailed way), it is necessary to dive deeper into the success/performance measures. For this purpose, a second set of correlations have been run between implementation orientations and the factors found in the factor analyses of the BSC perspective variables. The Table 5.29 shows the correlations between them.



Implementation Orientations

- Competitors
- Cost Reduction
- Internal Efficiency
- Customer Satisfaction
- Innovation and Learning
- Financial Advantage

Perceived Success Dimensions of CRM

| | |
|---|--|
| BSC Customer Perspective | <ul style="list-style-type: none"> • F1: Number, Cost and Transaction Amount of Customers • F2: Customer Satisfaction and Problem Solving • F3: Support Company/ Brand Recognition and Image • F4: Sales Support Services • F5: Determination of and Detailed Information about the Target Market • F6: Effective Customer Databases |
| BSC Internal Business Perspective | <ul style="list-style-type: none"> • F1: Help/Support Systems and Technology • F2: Security, Speed and Content of the Site |
| BSC Innovation and Learning Perspective | <ul style="list-style-type: none"> • Item1: Continuous Development/renew of Present Services • Item2: Increase the Development of New Services |
| BSC Financial Perspective | <ul style="list-style-type: none"> • F1: Improvement of Customer Profitability and Cost Reduction • F2: Decreasing Operational Costs |

Correlation analysis using Pearson correlation coefficients was applied on the research data in order to discover the relationship between these constructs based on the research framework.

There are a considerable number of correlations between a company's orientation for implementation a CRM system and the performance measures according to the BSC perspective factors. The correlations are expressed in the following subtitles.

Competitor-based Orientation and BSC Perspectives

An Internet company's orientation to implement a CRM system for "increasing competitiveness" has not been found to be correlated with any of the BSC perspectives' factors. Actually, competitor-based implementation was found to be the weakest one among the 6 major orientations. This shows that Turkish Internet companies have at least reached the level of realizing that CRM is not a system a company should implement only because competitors also have it. Therefore, it seems that it has not been seen as a valid orientation and is, therefore, not correlated with the performance measures of CRM.

Cost Reduction-based Orientation and BSC Perspectives

An Internet company's orientation to implement a CRM system for "reducing costs" has been found to be significantly positive correlated with the following factors of BSC perspectives:

Table 5.29 – Correlations between Cost Reduction and BSC Perspective Factors

| BSC Perspective | Factor | Pearson Correlation | Sig. (2-tailed) |
|-------------------------------|--|---------------------|-----------------|
| Internal Business Perspective | F2: Security, Speed and Content of the Site | .235* | .048 |
| Financial Perspective | F1: Improvement of Customer Profitability and Cost Reduction | .303* | .011 |
| Financial Perspective | F2: Decreasing Operational Costs | .416* | .000 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

As explained in the initial correlations, Internet companies that aim to implement CRM for the purpose of cost reduction can observe positive outcomes in terms of financial measures. This orientation has been found to positively with both dimensions of the financial perspective of BSC for this reason. Additionally, companies with this orientation have also been found to give importance to internal efficiency factors such as security, speed and content of the site. As will be seen in the upcoming correlations, the “security, speed and content of the site” factor of internal business perspective is found to be correlated with all implementation orientations except competitor-based orientation. This shows that this is a very important critical success factor for an Internet business regardless of why it is implementing CRM.

Internal Efficiency-based Orientation and BSC Perspectives

An Internet company’s orientation to implement a CRM system for “increasing internal efficiency” has been found to be significantly positive correlated with the following factors of BSC perspectives:

Table 5.30 – Correlations between Internal Efficiency and BSC Perspective Factors

| BSC Perspective | Factor | Pearson Correlation | Sig. (2-tailed) |
|-------------------------------------|--|---------------------|-----------------|
| Customer Perspective | F3: Support Company/ Brand Recognition and Image | .336** | .004 |
| Internal Business Perspective | F2: Security, Speed and Content of the Site | .384** | .001 |
| Innovation and Learning Perspective | Item2: Increase the development of New Services | .318* | .008 |
| Financial Perspective | F2: Decreasing Operational Costs | .239* | .048 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Companies with a strong emphasis on implementing CRM for increasing internal efficiency observe relevant outcomes such as decreasing operational costs, improvements in security, speed and content of the site or increasing rates of new service development. However, findings show that they do not miss the customers' satisfaction opportunity as well. They also benefit from increasing support in company brand recognition and image.

Customer Satisfaction-based Orientation and BSC Perspectives

An Internet company's orientation to implement a CRM system for "improving customer satisfaction" has been found to be significantly positive correlated with the following factors in the Table 5.31.

This finding shows that Internet companies whose major aim is to improve customer satisfaction by implementing a CRM system achieve this by experiencing increases in the number, cost and transaction amount of customers and improvements in the company's brand recognition and image. Additionally, they experience positive outcomes through increasing development of new services as well as continuous development of present services. Naturally, these create financial

success for companies in the form of increasing customer profitability and cost reduction.

Table 5.31 – Correlations between Customer Satisfaction and
BSC Perspective Factors

| BSC Perspective | Factor | Pearson Correlation | Sig. (2-tailed) |
|-------------------------------------|--|---------------------|-----------------|
| Customer Perspective | F1: Number, Cost and Transaction Amount of Customers | .368** | .001 |
| Customer Perspective | F3: Support Company/ Brand Recognition and Image | .258* | .028 |
| Internal Business Perspective | F2: Security, Speed and Content of the Site | .248* | .037 |
| Financial Perspective | F1: Improvement of Customer Profitability and Cost Reduction | .322** | .007 |
| Innovation and Learning Perspective | Item1: Continuous Development / renew of Present Services | .395** | .001 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Innovation and Learning-based Orientation and BSC Perspectives

An Internet company's orientation to implement a CRM system for "increasing innovation and learning" has been found to be significantly positive correlated with the following factors in the Table 5.32.

This finding shows that Internet companies whose major aim is to increase innovation and learning in the company by implementing a CRM system achieve this by experiencing positive outcomes through increasing development of new services as well as continuous development of present services. The companies which have realized that CRM is an innovation area, experience major increases in the number, cost and transaction amount of customers and customer satisfaction and problem solving. Naturally, these create financial success for companies in the form

of increasing customer profitability and cost reduction and also decreasing operational costs. Additionally, as mentioned before security, speed and content of the site factor is critical for innovation and learning-based implementation.

Table 5.32 – Correlations between Innovation and Learning and BSC Perspective Factors

| BSC Perspective | Factor | Pearson Correlation | Sig. (2-tailed) |
|-------------------------------------|--|---------------------|-----------------|
| Customer Perspective | F1: Number, Cost and Transaction Amount of Customers | .275* | .018 |
| Customer Perspective | F2: Customer Satisfaction and Problem Solving | .256* | .029 |
| Internal Business Perspective | F2: Security, Speed and Content of the Site | .368** | .001 |
| Financial Perspective | F1: Improvement of Customer Profitability and Cost Reduction | .304* | .011 |
| Financial Perspective | F2: Decreasing Operational Costs | .252* | .035 |
| Innovation and Learning Perspective | Item1: Continuous Development / renew of Present Services | .334** | .005 |
| Innovation and Learning Perspective | Item2: Increase the development of New Services | .420** | .000 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Financial Advantage-based Orientation and BSC Perspectives

An Internet company's orientation to implement a CRM system for "increasing financial advantage" has been found to be significantly positively correlated with the following factors of BSC perspectives:

Table 5.33 – Correlations between Financial Advantage and BSC Perspective

Factors

| BSC Perspective | Factor | Pearson Correlation | Sig. (2-tailed) |
|-------------------------------------|--|---------------------|-----------------|
| Customer Perspective | F1: Number, Cost and Transaction Amount of Customers | .283* | .015 |
| Customer Perspective | F2: Customer Satisfaction and Problem Solving | .246* | .036 |
| Customer Perspective | F3: Support Company/ Brand Recognition and Image | .238* | .043 |
| Internal Business Perspective | F2: Security, Speed and Content of the Site | .303** | .010 |
| Financial Perspective | F1: Improvement of Customer Profitability and Cost Reduction | .453** | .000 |
| Financial Perspective | F2: Decreasing Operational Costs | .268* | .026 |
| Innovation and Learning Perspective | Item1: Continuous Development / renew of Present Services | .276* | .023 |
| Innovation and Learning Perspective | Item2: Increase the development of New Services | .416** | .000 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

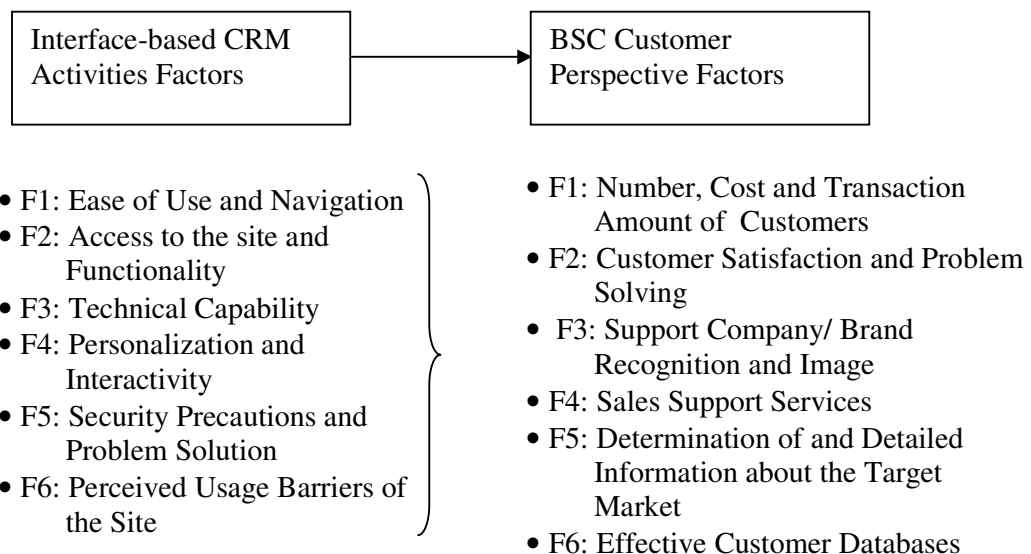
Companies with a strong emphasis on implementing CRM for increasing financial advantage observe relevant outcomes such as improvement of customer profitability and cost reduction and also decreasing operational costs. Additionally, increasing the development of new services factor is very important for this purpose because developing new services increase customer retention and this brings loyalty and as a result of loyalty, financial advantages are attained by the company. They also benefit from improvements in security, speed and content of the site and continuous development of present services. Additionally, companies benefited from customer perspective factors by experiencing increases in the number, cost and transaction amount of customers, improvements in the company's brand recognition and image and improvements in customer satisfaction and problem solving.

Interface-based Activities Factors and BSC Customer Perspective Factors

Hypothesis 2: There is a correlation between the utilization of interface-based activities of companies for CRM purposes and their performance in customer-based measurement metrics.

For testing this hypothesis, a correlation analysis has been done between the importance levels attributed to 6 interface-based activities factors and 6 BSC customer perspective factors. Correlation analysis using Pearson correlation coefficients was applied on the research data in order to discover the relationship between these constructs based on the research framework.

Hypothesis 2 is confirmed by the result of this set of correlation analysis since it is observed that there are a considerable number of correlations between Interface-based activities factors and BSC Customer perspective factors. The correlations are expressed in the following subtitles.



Ease of Use and Navigation and BSC Customer Perspective Factors

An Internet company’s interface-based activities factor “ease of use and navigation” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.34 – Correlations between Ease of Use and Navigation and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|----------------------------|---|--|---|-------------------------------------|---|---|
| Ease of Use and Navigation | | | | | | |
| Pearson Correlation | .465** | .348** | .386** | .414** | .336** | .065 |
| Sig. (2-tailed) | .000 | .002 | .001 | .000 | .003 | .586 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

These findings show that “ease of use and navigation” factor of interface-based activities is correlated most of the BSC customer perspective factors. This means that this factor is an extremely important success factor for an Internet company. The companies, which have realized that ease of use and navigation is a very critical feature for the company’s Web site, gain positive outcomes in terms of number, cost and transaction amount of customers, customer satisfaction and problem solving, company/ brand recognition and image, sales support services and getting high quality information about the target market. Naturally, most Internet users do not prefer complex Web sites. The results of the correlation analysis also confirm this judgment.

Access to the Site and Functionality and BSC Customer Perspective Factors

An Internet company’s interface-based activities factor “access to the site and functionality” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.35 – Correlations between Access to the Site and Functionality and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|--------------------------------------|---|--|---|-------------------------------------|---|---|
| Access to the site and Functionality | | | | | | |
| Pearson Correlation | .407** | .317** | .511** | .379** | .339** | .244* |
| Sig. (2-tailed) | .000 | .005 | .000 | .001 | .003 | .039 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This finding shows that “access to the site and functionality” factor of interface-based activities is correlated with the whole BSC customer perspective factors. This means that this factor is a critical success factor an Internet company. The companies, which have been realized that accessing the site from different channels easily is extremely important, gain positive outcomes in terms of number, cost and transaction amount of customers, customer satisfaction and problem solving, company/ brand recognition and image, sales support services, getting high quality information about the target market and effective customer databases. Additionally, accessing the site easily from various channels and being a functional web site boost customer satisfaction.

Technical Capability and BSC Customer Perspective Factors

An Internet company’s interface-based activities factor “technical capability” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.36 – Correlations between Technical Capability and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|-----------------------------|---|--|---|-------------------------------------|---|---|
| Technical Capability | | | | | | |
| Pearson Correlation | .273* | .192 | .146 | .174 | .231* | .205 |
| Sig. (2-tailed) | .017 | .096 | .204 | .138 | .047 | .083 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

As the factor “technical capability” is a technical issue, it is positively correlated with number, cost and transaction amount of customers and getting high quality information about the target market factors. Technical capability can be considered as a customer satisfaction measure and this brings benefits for an Internet company.

Interactivity and BSC Customer Perspective Factors

An Internet company’s interface-based activities factor “personalization and interactivity” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.37 – Correlations between Personalization and Interactivity and
BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|--|---|--|---|-------------------------------------|---|---|
| Personalization and Interactivity | | | | | | |
| Pearson Correlation | .447** | .387** | .247* | .248* | .291* | .248* |
| Sig. (2-tailed) | .000 | .001 | .031 | .033 | .011 | .036 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This finding shows that “personalization and interactivity” factor of interface-based activities is correlated with all BSC customer perspective factors. This means that this factor is a very important critical success factor for an Internet company. The companies, which have realized that customers prefer the sites that have personalization features and interactive pages, gain positive outcomes in terms of number, cost and transaction amount of customers, customer satisfaction and problem solving, company/ brand recognition and image , sales support services, getting high-quality information about the target market and effective customer databases.

Security Precautions and Problem Solution and BSC Customer Perspective Factors

An Internet company’s interface-based activities factor “security precautions and problem solution” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.38 – Correlations between Security Precautions and Problem Solution and
BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|---|---|--|---|-------------------------------------|---|---|
| Security Precautions and Problem Solution | | | | | | |
| Pearson Correlation | .234* | .238* | .254* | .236* | .169 | .053 |
| Sig. (2-tailed) | .042 | .038 | .026 | .043 | .148 | .657 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Companies with a strong emphasis on “security precautions and problem solution” observe relevant outcomes such as increasing number, cost and transaction amount of customers, customer satisfaction and problem solving, company/ brand recognition and image, and sales support services. However, taking security precautions does not increase effectiveness in getting information about the target market or creating effective databases. In the Internet era, security, trust and quick problem solution are extremely vital issues. Customers can purchase products or use services as long as they believe that the site is secure and trustable.

Perceived Usage Barriers of the Site and BSC Customer Perspective Factors

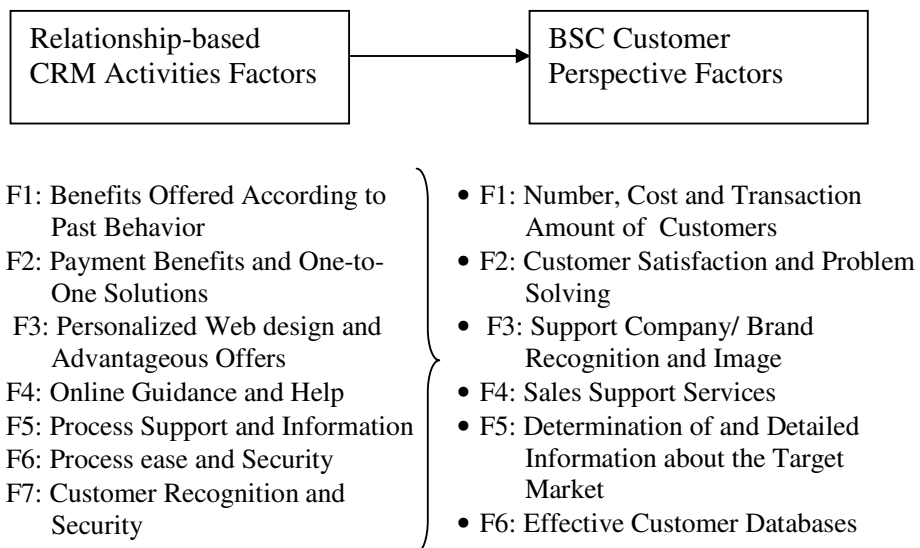
An Internet company’s interface-based activities factor “perceived usage barriers of the site” has not been found to be correlated with any of the BSC customer perspectives’ factors. Actually, this factor’s composition is problematic. The items that form this factor are not fully relevant with each other and thus, this finding can be accepted as an expected limitation.

Relationship-based Activities Factors and BSC Customer Perspective Factors

Hypothesis 3: There is a correlation between the utilization of relationship-based activities of companies for CRM purposes and their performance in customer-based measurement metrics.

For testing this hypothesis, a correlation analysis has been done between the importance levels attributed to 7 relationship-based activities factors and 6 BSC customer perspective factors. Correlation analysis using Pearson correlation coefficients was applied on the research data in order to discover the relationship between these constructs based on the research framework.

Hypothesis 3 is confirmed by the result of this set of correlation analysis since it is observed that there are a considerable number of correlations between relationship-based activities factors and BSC Customer perspective factors. The correlations are expressed in the following subtitles.



Benefits Offered According to Past Behavior and BSC Customer Perspective Factors

An Internet company’s relationship-based activities factor “benefits offered according to past behavior” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.39 – Correlations between Benefits Offered According to Past Behavior and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|--|---|--|---|-------------------------------------|---|---|
| Benefits Offered According to Past Behavior | | | | | | |
| Pearson Correlation | .235* | .235* | .404** | .397** | .257* | .330** |
| Sig. (2-tailed) | .041 | .041 | .000 | .000 | .026 | .005 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Companies with a strong emphasis on “benefits offered according to past behavior” gain positive outcomes from all factors of BSC customer perspective especially supporting company/ brand recognition and image, sales support services and effective customer databases. As customers past purchasing behavior can be monitored and inspected from creating effective customer databases and utilizing efficient sales support services, it is considered that these factors are critical success factors for implementing a CRM application.

Payment Benefits and One-to-One Solutions and BSC Customer Perspective Factors

An Internet company’s relationship-based activities factor “payment benefits and one-to-one solutions” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.40 – Correlations between Payment Benefits and One-to-One Solutions and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|--|---|--|---|-------------------------------------|---|---|
| Payment Benefits and One-to-One Solutions | | | | | | |
| Pearson Correlation | .430** | .389** | .171 | .357** | .280* | .267* |
| Sig. (2-tailed) | .000 | .001 | .138 | .002 | .015 | .024 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Internet companies that place a heavier emphasis on payment benefits and one-to-one solutions observe positive outcomes in terms of number, cost and transaction amount of customers, customer satisfaction and problem solving, sales support services, getting high quality information about the target market and effective customer databases. However, it does not support company/ brand recognition and image of the company.

Personalized Web Design and Advantageous Offers and BSC Customer Perspective

Factors

An Internet company’s relationship-based activities factor “personalized Web design and advantageous offers” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.41 – Correlations between Personalized Web Design and Advantageous Offers and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|---|---|--|---|-------------------------------------|---|---|
| Personalized Web Design and Advantageous Offers | | | | | | |
| Pearson Correlation | .101 | .173 | .440** | .325** | .154 | .234* |
| Sig. (2-tailed) | .386 | .134 | .000 | .005 | .186 | .048 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This finding shows that “personalized Web design and advantageous offers” factor of relationship-based activities is correlated with three of the six BSC customer perspective factors. The companies, which have been realized that customers prefer personalized Web designs and advantageous offers, gain positive outcomes in terms of support company/ brand recognition and image, sales support services and effective customer databases. Naturally, it is necessary to have effective customer databases to make personalized offers. As a result, this factor supports company/brand recognition and image in Internet among the competitors.

Online Guidance and Help and BSC Customer Perspective Factors

An Internet company’s relationship-based activities factor “online guidance and help” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.42 – Correlations between Online Guidance and Help and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|---------------------------------|---|--|---|-------------------------------------|---|---|
| Online Guidance and Help | | | | | | |
| Pearson Correlation | .324** | .276* | .190 | .094 | .135 | .050 |
| Sig. (2-tailed) | .004 | .016 | .097 | .425 | .248 | .679 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This finding shows that “online guidance and help” factor of relationship-based activities is positively correlated with number, cost and transaction amount of customers and customer satisfaction and problem solving factors. Naturally, customers sometimes need immediate and quick guidance or help in the Web site and this factor, online guidance and help, brings customer satisfaction and also creates an increase in number, cost and transaction amount of customers.

Online Support and Information and BSC Customer Perspective Factors

An Internet company’s relationship-based activities factor “online support and information” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.43 – Correlations between Online Support and Information and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|---------------------------------------|---|--|---|-------------------------------------|---|---|
| Online Support and Information | | | | | | |
| Pearson Correlation | .232* | .122 | .165 | .179 | .073 | .233* |
| Sig. (2-tailed) | .044 | .293 | .151 | .127 | .536 | .049 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This finding shows that “online support and information” factor of relationship-based activities is positively correlated with number, cost and transaction amount of customers and effective customer databases factors. As explained in the previous correlation, online support and information increase number, cost and transaction amount of customers and it is required to utilize effective customer databases.

Process Ease and Security and BSC Customer Perspective Factors

An Internet company’s relationship-based activities factor “process ease and security” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.44– Correlations between Process Ease and Security and
BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|---------------------------|---|--|---|-------------------------------------|---|---|
| Process Ease and Security | | | | | | |
| Pearson Correlation | .312** | .353** | .143 | .157 | .219 | .220 |
| Sig. (2-tailed) | .006 | .002 | .213 | .182 | .059 | .063 |

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

This finding shows that “process ease and security” factor of relationship-based activities is positively correlated with number, cost and transaction amount of customers and customer satisfaction and problem solving factors. It can be seen that easily completed processes and secure transactions are preferred features for successful Web sites and these bring customer satisfaction and also increase number, cost and transaction amount of customers.

Customer Recognition and Security and BSC Customer Perspective Factors

An Internet company’s relationship-based activities factor “customer recognition and security” has been found to be significantly positively correlated with the following factors of BSC customer perspective:

Table 5.45– Correlations between Customer Recognition and Security and BSC Customer Perspective Factors

| | F1: Number, Cost and Transaction Amount of Customers | F2: Customer Satisfaction and Problem Solving | F3: Support Company/ Brand Recognition and Image | F4: Sales Support Services | F5: Determination of and Detailed Information about the Target Market | F6: Effective Customer Databases |
|--|---|--|---|-------------------------------------|---|---|
| Customer Recognition and Security | | | | | | |
| Pearson Correlation | .173 | .039 | .265* | .176 | .053 | .154 |
| Sig. (2-tailed) | .134 | .737 | .020 | .134 | .653 | .197 |

* Correlation is significant at the 0.05 level (2-tailed).

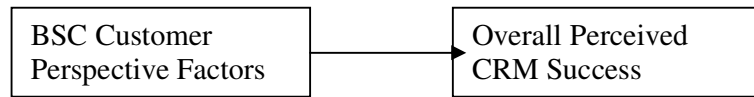
** Correlation is significant at the 0.01 level (2-tailed).

Internet companies that place a heavier emphasis on “customer recognition and security factor” observe positive outcomes only in terms of company/ brand recognition and image. Interestingly, although the Internet companies prefer customer recognition for gathering information about customers and having effective customer databases, it is not correlated with the effective customer databases factor of BSC customer perspective.

Regression Analyses

BSC Customer Perspective Factors and Perceived Success Dimensions of CRM

Hypothesis 4: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system’s positive outcomes about customer relations and satisfaction.



- F1: Number, Cost and Transaction Amount of Customers
- F2: Customer Satisfaction and Problem Solving
- F3: Support Company/ Brand Recognition and Image
- F4: Sales Support Services
- F5: Determination of and Detailed Information about the Target Market
- F6: Effective Customer Databases

Table 5.46 – ANOVA Table of Regression between BSC Customer Perspective Factors and Perceived Success Dimensions of CRM

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|-------------------|
| 1 | Regression | 11.43 | 6 | 1.904 | 4.286 | .001 ^a |
| | Residual | 27.10 | 61 | .444 | | |
| | Total | 38.53 | 67 | | | |

- a. Predictors: (Constant), Factor 6, Factor 4, Factor3, Factor 2, Factor5, Factor1
 b. Dependent Variable: Perceived CRM Success

According to the ANOVA table of regression analysis, the predictive label by the dependent variable is high with an F value of 4.286 and a significance level of 0.001. Thus, perceived CRM success can be predicted by the regression equation by the input variables.

Table 5.47 – Model Summary of Perceived CRM Success and BSC Customer Perspective Regression Analyses

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .545 ^a | .297 | .227 | .66657 |

a. Predictors: (Constant), Factor 6, Factor 4, Factor3, Factor 2, Factor5, Factor1

R takes the values between -1 and +1, and R^2 takes the values between 0 and 1. If the absolute value of R is close to 1, this shows the strength of the regression equation in terms of high predictive value. In the model summary, the value of R is .545^a and the value of R^2 is .297. This means that the result of regression equation is very satisfying.

The t statistics helps to determine the relative importance of each variable in the model. Significant t values are useful predictors.

Table 5.48 – Regression Coefficients of Dependent Variable Perceived CRM Success

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 1.876 | .565 | | 3.318 | .002 |
| Factor 1 | .331 | .184 | .271 | 1.803 | .076 |
| Factor 2 | .272 | .204 | .216 | 1.338 | .186 |
| Factor 3 | .143 | .156 | .119 | .921 | .361 |
| Factor 4 | -.289 | .127 | -.285 | -2.278 | .026 |
| Factor 5 | -.023 | .145 | -.024 | -.160 | .873 |
| Factor 6 | .174 | .090 | .228 | 1.924 | .059 |

a. Dependent Variable: Perceived CRM Success

If only the variables with significance under .10 are listed, the updated table is below:

Table 5.49 – List of significant Factors for Perceived CRM Success by Regression

| | t | Sig. |
|----------|--------|------|
| Factor 1 | 1.803 | .076 |
| Factor 4 | -2.278 | .026 |
| Factor 6 | 1.924 | .059 |

Then, regression equation of perceived CRM success is:

$$\begin{aligned} \text{Perceived CRM Success} = & 1.8766 + .331*(\text{Factor 1}) + .272*(\text{Factor 2}) \\ & + .143*(\text{Factor 3}) - .289*(\text{Factor 4}) - .023*(\text{Factor 5}) \\ & + .174*(\text{Factor 6}) \end{aligned}$$

Simplified regression equation of perceived CRM success is:

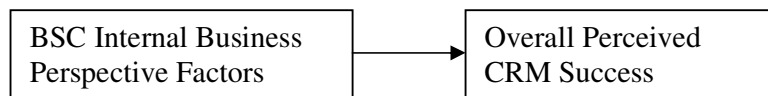
$$\begin{aligned} \text{Perceived CRM Success} = & 1.8766 + .331*(\text{Factor 1}) - .289*(\text{Factor 4}) \\ & + .174*(\text{Factor 6}) \end{aligned}$$

The aim of creating a regression equation is determining the independent variables among the input variables which predict the perceived CRM success best. The three factors to predict CRM success that are founded in the simplified regression analysis play key role when they are compared with other factors. The meaning of this simplified equation is that perceived CRM success is determined by number, cost and transaction amount of customers, sales support services, and effective customer databases. Customer retention and loyalty are the core issues in the CRM; therefore this takes first order in the equation. Moreover, as CRM is a process-based application, sales support services are also important and have secondary importance. Finally, since creating and using effective databases is a crucial feature for CRM, it takes third level of importance in the equation.

This equation emphasized that collecting information about these 3 factors are critical to determine the CRM success. Thus, Hypothesis 4 is partially supported with the regression analysis of these three results over 6.

BSC Internal Businesses Perspective Factors and
Perceived Success Dimensions of CRM

Hypothesis 5: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system’s positive outcomes about internal business efficiency.



- F1: Help/Support Systems and Technology Security, Speed and Content of the Site
- F2: Security , Speed and Content of the Site

Table 5.50 – ANOVA Table of Regression between BSC Internal businesses

Perspective Factors and Perceived Success Dimensions of CRM

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1 | Regression | 13.81 | 2 | 6.903 | 16.894 | .000 ^a |
| | Residual | 28.19 | 69 | .409 | | |
| | Total | 42.00 | 71 | | | |

- c. Predictors: (Constant), Factor 2, Factor 1
d. Dependent Variable: Perceived CRM Success

According to the ANOVA table of regression analysis, the predictive label by the dependent variable is high with an F value of 16.894 and a significance level of 0.000. Thus, perceived CRM success can be predicted by the regression equation by the input variables.

Table 5.51 – Model Summary of Perceived CRM Success and BSC Internal Businesses Perspective Regression Analyses

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .573 ^a | .329 | .309 | .63922 |

a. Predictors: (Constant), Factor 2, Factor1

Table 5.52 – Regression Coefficients of Dependent Variable Perceived CRM Success

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 1.545 | .411 | | 3.762 | .000 |
| Factor 1 | .212 | .135 | .190 | 1.574 | .120 |
| Factor 2 | .496 | .135 | .442 | 3.662 | .000 |

b. Dependent Variable: Perceived CRM Success

If only the variables with significance under .10 are listed, the updated table is below:

Table 5.53 – List of significant Factors for Perceived CRM Success by Regression

| | t | Sig. |
|----------|-------|------|
| Factor 2 | 3.662 | .000 |

Then, regression equation of perceived CRM success is:

$$\text{Perceived CRM Success} = 1.545 + .212*(\text{Factor 1}) + .496*(\text{Factor 2})$$

Simplified regression equation of perceived CRM success is:

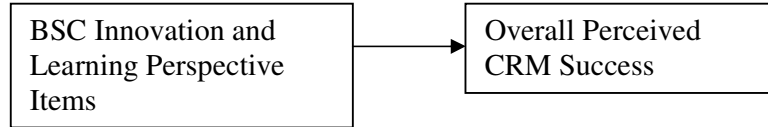
$$\text{Perceived CRM Success} = 1.545 + .496 * (\text{Factor 2})$$

The meaning of this simplified equation is that perceived CRM success is determined by “security, speed and content of the site”. As mentioned in the previous correlations between implementation orientation of CRM and BSC perspectives, the “security, speed and content of the site“ factor of internal business perspective is found to be correlated with all implementation orientations except competitor-based orientation, thus, this factor is very important for the company. Security is a fundamental issue for e-CRM. It is obvious that security, speed and content factor have shown oneself as an important factor from different analysis. Consequently, this factor plays a very key role when it is compared with the other factors in this regression analysis and collecting information about this factor is critical to determine the CRM success. Thus, Hypothesis 5 is partially supported with the regression analysis of this one result over 2.

BSC Innovation and Learning Perspective Items and

Perceived Success Dimensions of CRM

Hypothesis 6: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system’s positive outcomes about improvements in innovation and learning environment in the company.



- Item1: Continuous Development /renew of Present Services
- Item2: Increase the Development of New Services

Table 5.54 – ANOVA Table of Regression between BSC Innovation and Learning Perspective Items and Perceived Success Dimensions of CRM

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|-------------------|
| 1 | Regression | 7.06 | 2 | 3.528 | 6.871 | .002 ^a |
| | Residual | 34.92 | 68 | .513 | | |
| | Total | 41.97 | 70 | | | |

e. Predictors: (Constant), Item 2, Item 1

f. Dependent Variable: Perceived CRM Success

According to the ANOVA table of regression analysis, the predictive label by the dependent variable is high with an F value of 6.871 and a significance level of 0.002. Thus, perceived CRM success can be predicted by the regression equation by the input variables.

Table 5.55 – Model Summary of Perceived CRM Success and BSC Innovation and Learning Perspective Items Regression Analyses

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .410 ^a | .168 | .144 | .71656 |

a. Predictors: (Constant), Item 2, Item 1

Table 5.56 – Regression Coefficients of Dependent Variable

Perceived CRM Success

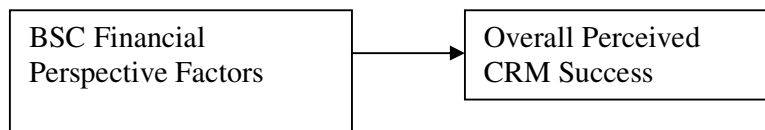
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 2.276 | .429 | | 5.308 | .000 |
| Item 1 | .219 | .187 | .207 | 1.170 | .246 |
| Item 2 | .237 | .183 | .228 | 1.292 | .201 |

c. Dependent Variable: Perceived CRM Success

The values are larger than .10, so they are not significant. Therefore, Hypothesis 6 is not supported with this regression analysis.

BSC Financial Perspective Factors and Perceived Success Dimensions of CRM

Hypothesis 7: Perceived success of CRM implementation in an Internet business is influenced/ determined by the system’s positive outcomes about financial measures.



- F1: Improvement of Customer Profitability and Cost Reduction
- F2: Decreasing Operational Costs

Table 5.57 – ANOVA Table of Regression between BSC Financial Perspective Factors and Perceived Success Dimensions of CRM

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|-------------------|
| 1 | Regression | 4.72 | 2 | 2.359 | 4.646 | .013 ^a |
| | Residual | 34.52 | 68 | .508 | | |
| | Total | 39.24 | 70 | | | |

g. Predictors: (Constant), Factor 2, Factor 1

h. Dependent Variable: Perceived CRM Success

According to the ANOVA table, the predictive label by the dependent variable is high with an F value of 4.646 and a significance level of 0.013. Thus, perceived CRM success can be predicted by the regression equation by the input variables.

Table 5.58 – Model Summary of Perceived CRM Success and BSC Financial Perspective Regression Analyses

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .347 ^a | .120 | .094 | .71252 |

a. Predictors: (Constant), Factor 2, Factor1

Table 5.59 – Regression Coefficients of Dependent Variable

Perceived CRM Success

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 2.632 | .393 | | 6.692 | .000 |
| Factor 1 | .275 | .135 | .265 | 2.040 | .045 |
| Factor 2 | .104 | .104 | .129 | .996 | .323 |

d. Dependent Variable: Perceived CRM Success

If only the variables with significance under .10 are listed, the updated table is below:

Table 5.60 – List of significant Factors for Perceived CRM Success by Regression

| | t | Sig. |
|----------|-------|------|
| Factor 1 | 2.040 | .045 |

Then, regression equation of perceived CRM success is:

$$\text{Perceived CRM Success} = 2.632 + .275*(\text{Factor 1}) + .104*(\text{Factor 2})$$

Simplified regression equation of perceived CRM success is:

$$\text{Perceived CRM Success} = 2.632 + .275*(\text{Factor 1})$$

The meaning of this simplified equation is that perceived CRM success is determined by “improvement of customer profitability and cost reduction” factor of BSC financial perspective. It is expected that an Internet company’s aim is to gain financial advantages and achieve higher levels of financial outcomes such as increasing profitability and cost reduction by using CRM implementation. The simplified equation confirms this expectation and collecting information about this factor is critical to determine the CRM success. Thus, Hypothesis 7 is partially supported with the regression analysis of this one result over 2.

As stated repetitively in the literature, the aim of CRM is to increase existing customer profitability. The result of this equation in this study shows a parallel route with the literature. Moreover, companies also benefit from cost reduction by implementing CRM.

ANOVA Analyses

The regression analyses between BSC perspectives’ factors and perceived success dimensions of CRM need to be confirmed further. Hypothesis 4, Hypothesis 5, and Hypothesis 7 were partially supported and Hypothesis 6 was not supported. When factors were used their single effects could disappeared and full effects might

not have been measured. Therefore, it was decided to use all BSC 4 perspectives' items one-by-one with ANOVA analyses to catch their single effect to the CRM success and to determine which means differ and make differences exist among the others. Additionally, the CRM success variables might not differentiate the important items as well. In order to hinder these side effects, the CRM success scale was recoded into three groups of business with relatively different levels of perceived CRM success. "Very Successful" item is recoded as 3 (exceptionally successful), "Quite Successful" item is recoded as 2(more successful), and finally other items "Partially Successful and Not Very Successful" are recoded as 1(less successful) in these analyses. Since there is not any respondent who stated that their company is unsuccessful, it is out of this recoding process.

BSC Customer Perspective and Recoded Perceived CRM Success

Hypothesis 8: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to customer-based performance measures of CRM.

An ANOVA analysis is done between BSC customer perspective items and recoded perceived CRM success in order to determine which means differ and make differences exist among the others.

The variables in the BSC customer perspective which effects perceived CRM success are listed in the Table 5.61. There are 24 items in BSC Customer Perspective and 16 of them make differences. It can be easily seen from the table that there are differences between means of the 3 success levels as the value passes through the

more successful one the mean generally increases. The results show similar tendency with the regression analyses in terms of number, cost and transaction amount of customers and effective customer databases factors. However, it is surprising that none of the sales support services factor's items appeared in ANOVA analysis. Hypothesis 8 is confirmed with this ANOVA analysis.

Table 5.61 - BSC Customer Perspective and Recoded Perceived CRM Success

| Variables | F | Sig. | 1. Mean | 2. Mean | 3. Mean |
|--|-------|------|------------|------------|------------|
| The perception of our company as a high-tech/innovative brand has improved. | 6.719 | .002 | 2.8696 | 3.5405 | 3.4615 |
| The total customer number has increased. | 3.233 | .045 | 3.1818 | 3.4595 | 3.7692 |
| The ratio of reuse/repurchase of services offered on the site has increased. | 3.886 | .025 | 2.8182 | 3.4324 | 3.3333 |
| The reacquisition of lost customers has increased. | 4.477 | .015 | 2.1364 | 2.6389 | 3.0833 |
| The process of service completion/delivery is shortened. | 4.517 | .014 | 2.8182 | 3.4054 | 3.5000 |
| Effective customer databases have been created. | 6.499 | .003 | 3.1364 | 3.6757 | 3.7500 |
| The contribution to the correct determination of target markets has increased. | 4.240 | .018 | 2.8095 | 3.3243 | 3.5000 |
| The databases are more effectively used to develop various marketing methods and strategies. | 7.536 | .001 | 2.4000 | 3.3784 | 3.1667 |
| Customer satisfaction has increased. | 6.425 | .003 | 3.1364 | 3.7105 | 3.6923 |
| Customer transaction frequency has increased. | 7.438 | .001 | 2.9091 | 3.4737 | 3.7692 |
| Customer transaction amount has increased. | 5.718 | .005 | 2.9545 | 3.5000 | 3.6667 |
| The usage rate of processes/services provided on the site has increased. | 7.967 | .001 | 2.7619 | 3.4324 | 3.5833 |
| The time customers spend on the site has increased. | 3.772 | .028 | 2.7273 | 3.1622 | 3.4615 |
| Conveying complaints to the related people have become easier and accelerated. | 7.654 | .001 | 2.9545 | 3.7027 | 3.3077 |
| The ratio of the solutions provided to the complaints of customers has improved. | 4.705 | .012 | 3.0909 | 3.6216 | 3.000 |
| The usage of help/support systems on the site has increased. | 4.181 | .019 | 2.5714 | 3.2703 | 3.0000 |

BSC Internal Businesses Perspective and Recoded Perceived CRM Success

Hypothesis 9: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to internal business efficiency-based performance measures of CRM.

An ANOVA analysis is done between BSC internal business perspective items and recoded perceived CRM success in order to determine which means differ and make differences exist among the others.

The variables in the BSC internal business perspective which effects perceived CRM success are listed in the Table 5.62.

Table 5.62 - BSC Internal Businesses Perspective and Recoded Perceived CRM Success

| Variables | F | Sig. | 1. Mean | 2. Mean | 3. Mean |
|---|--------|------|---------|---------|---------|
| The usage of technology in the company has increased and improved. | 3.544 | .034 | 3.1000 | 3.5946 | 3.6154 |
| The quality of help/support systems on the site has increased. | 6.192 | .003 | 2.8182 | 3.5405 | 3.1667 |
| The variety of help/support systems (e-mail, online consultancy, etc.) on the site has increased. | 11.179 | .000 | 2.5909 | 3.5676 | 3.1667 |
| The frequency of updating used software has increased. | 9.006 | .000 | 2.6190 | 3.5135 | 3.4615 |
| The usage ratio of new technology compared to competitors has increased. | 13.004 | .000 | 2.5000 | 3.3784 | 3.6667 |
| The business processes in the organization have speeded up and become more effective. | 11.577 | .000 | 2.7619 | 3.5676 | 3.6667 |
| The security of business processes in the organization has increased. | 9.778 | .000 | 2.5238 | 3.4324 | 3.4167 |
| The content management of the site has improved. | 6.175 | .003 | 2.5909 | 3.3684 | 3.3846 |

It can be easily seen from the table that all 8 items of BSC internal business perspective make differences and additionally there are differences between means of the 3 success levels as the value passes through the more successful one the mean generally increases. Hypothesis 9 is confirmed with this ANOVA analysis.

BSC Innovation and Learning Perspective and Recoded Perceived CRM Success

Hypothesis 10: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to innovation and learning-based performance measures of CRM.

An ANOVA analysis is done between BSC innovation and learning perspective's 2 items and recoded perceived CRM success in order to determine which means differ and make differences exist among the others.

The variables in the BSC innovation and learning perspective which effects perceived CRM success are listed in the Table 5.63.

Table 5.63 - BSC Innovation and Learning Perspective and Recoded Perceived CRM Success

| Variables | F | Sig. | 1. Mean | 2. Mean | 3. Mean |
|--|-------|------|---------|---------|---------|
| The present services are continuously developed and renewed. | 3.577 | .033 | 3.1364 | 3.5000 | 3.7692 |
| The ratio of developing new services has increased. | 3.912 | .025 | 3.0909 | 3.4595 | 3.7692 |

It can be easily seen from the table that all 2 items of BSC innovation and learning perspective make differences and additionally there are differences between means of the 3 success levels as the value passes through the more successful one

the mean generally increases. Hypothesis 10 is confirmed with this ANOVA analysis.

BSC Financial Perspective and Recoded Perceived CRM Success

Hypothesis 11: There is a difference between three groups of businesses with relatively different levels of perceived CRM success with respect to financial performance measures of CRM.

An ANOVA analysis is done between BSC financial perspective's 8 items and recoded perceived CRM success in order to determine which means differ and make differences exist among the others.

The variables in the BSC financial perspective which effects perceived CRM success are listed in the Table 5.64. It can be easily seen from the table that 3 items of BSC financial perspective make differences and as a result of this ANOVA analysis Hypothesis 11 is confirmed.

Table 5.64 - BSC Financial Perspective and Recoded Perceived CRM Success

| Variables | F | Sig. | 1. Mean | 2. Mean | 3. Mean |
|--|-------|------|------------|------------|------------|
| The contribution of online products to the protection/development of market share has increased. | 3.783 | .028 | 2.8261 | 3.4737 | 3.2727 |
| Customer support systems' costs (FAQs, online help, online user groups, etc.) have decreased. | 6.458 | .003 | 2.4762 | 3.3514 | 3.0909 |
| The annual sales gained from the loyal customers were increased. | 4.917 | .010 | 2.5238 | 3.2703 | 3.2727 |

CHAPTER 6

IMPLICATIONS AND LIMITATIONS

The purpose of this thesis study is to explore the adoption and the implementation of customer relationship management (CRM) activities in Internet businesses in Turkey.

In this study, a comprehensive list of studies about CRM, e-CRM, e-loyalty, and personalization, motivations for CRM implementation, Human Computer Interaction (HCI), performance measurement tools, and balanced scorecard is studied in the literature. After an extensive literature review, a questionnaire was prepared and delivered to the Internet businesses in Turkey.

At the end of the data-gathering period, descriptive, factor, correlation, regression and ANOVA analyses were studied by using SPSS with 81 participants' data. There are numerous implications for the findings of the analyses.

Findings reveal that, sectors that are advanced in CRM in offline sectors also seem to be advanced in using CRM in the online environment. Thus, more responses have been received from these sectors.

The results of this study showed that most Internet businesses seem to prefer to develop their CRM systems in-house or adapt it for their company. This implies that standard CRM systems do not work for specific and detailed demands of company and customer requirements.

Moreover, Internet companies' main motivation orientation for CRM implementation is found to be customer satisfaction. This is expected and well-understood because it is very logical for a company to aim customer satisfaction, which brings customer retention and loyalty and profitability as well.

It is revealed from the results that companies also stated to enhance their innovative position and internal efficiency as important. This study showed that companies also realize the awareness that these will turn into financial gains as an outcome. According to findings, companies declare lower level of orientation toward using CRM systems to reduce their costs or beat competition. Companies did not see implementing CRM as a fashion or fad. CRM is strategically important for these two aspects too and Internet companies should realize this in the future.

Additionally, companies generally place an emphasis on technology related interface-based activities such as domain name, up-to-dateness, and security. Personalization and interactivity issues are stated to be relatively less important. This can be considered that Turkish Internet businesses consider CRM as a generally technologic issue. This thought should change, too. Because it is not only a technology-related issue but it also has interactivity, personalization and customization dimension.

Another conclusion of this study is that most companies use traditional communication tools and they are not very hi-tech ones. Actually, we can divide communication tools into three categories according to these study findings. First category contains common traditional tools like e-mail, postal address, telephone number, fax number, message/request/complaint forms, and Frequently Asked Questions (FAQs). The second category contains less common ones like mail lists, online meeting/support, newsgroups and forum. The third category contains rarely used communication tools like voice message system, chat rooms, video conferencing and electronic conference. Not preferring video conferencing or electronic conference is expected since those tools are very expensive and need very advanced infrastructure and also there are not enough customer-based activities to

make them profitable yet. However, companies should prepare to develop and implement two-way or many-way interactive CRM tools for the near future and make investment in these areas.

There are four major areas for experiencing improvements by implementing CRM activities in a company. These are customer satisfaction, internal efficiency, technology and innovation and financial performance. When respondents are asked to state how much improvement their company has experienced in the four areas by implementing CRM activities by attributing each dimension a percent value over 100, it has been seen that customer satisfaction is ultimately important for most of the respondents. However, in the detailed BSC analyses it has been clearly seen that internal business efficiency, and innovation and learning measures also take place in importance attributes along with customer satisfaction. Although the companies state they apply CRM for experiencing improvements in customer satisfaction, they are not aware of experiencing most of the benefits from internal efficiency and innovation and learning dimensions.

Furthermore, despite the fact that most of the Internet companies claim their applications have been successful, approximately 50% percent of them have seen themselves as “quite successful” and 24.7% percent of them have seen themselves as “partially successful”. It means that companies believe CRM is a developing area, which Internet companies should dwell upon. Thus, this is an important result for our study.

In the fields of implementation orientation and success, there are both consistent findings and inconsistent and difficult to interpret findings. This result shows that it is required for Internet companies to achieve a vision enlargement for revising their CRM application purposes and targets and the final expected gains.

One of the implications of this study for researchers is that successful and high reliability scales are developed. Additionally, it is pointed that BSC can be considered as a performance measurement tool for CRM. These scales and the BSC approach may be used for further researches or other approaches, which give importance not only to customer satisfaction but also other dimensions, as well.

Each factor of interface-based activities and relationship-based activities are found to be extremely influential for customers. Firms understand that they should develop continuous improvements on these fields. This means good interface is not enough alone for success; companies should build good relationships with customers and continue developments in their sectors. It is shown that this findings support classical CRM thought.

The factors that have more input to the success of an Internet company are BSC Customer Perspective's three factors; number, cost and transaction amount of customers, sales support systems and effective customer databases. The companies that are successful on CRM applications are successful in these factors. These factors can be considered as critical success factors for an Internet company's CRM success. Security, speed and content of the site factor of BSC Internal Business Perspective differentiate the firms that are successful in customer profitability and cost reduction. When these four factors are considered as important success measures, it is seen that Turkish Internet businesses know the weak spot of success in CRM.

With this study, we have examined the current situation of Internet businesses in Turkey. It is obvious that the importance of CRM systems and applications is understood and major businesses started to use CRM. However, this could be thought with only marketing and customer satisfaction dimensions. CRM

applications should be integrated with all systems in the company and to do this, all-necessary technologies should be developed.

Researchers should have a tendency to perform research studies which inspect system/ business process dimensions and additionally, as a repeating theme, customer satisfaction dimension for CRM success.

This study has also some limitations. One of the limitations is about sample size and data collection problems. Since the number of professional businesses on the Internet environment in Turkey is quite low, when we searched them for sampling purposes, we have seen that many of the businesses are not adequate for joining our population. Besides, some of the firms, which have stated that their CRM activities are not adopted and implemented sufficiently, refused to answer the questionnaire and join the survey. Moreover, most of the firms have not deeply adopted and implemented CRM in terms of strategic commitment and advancement dimensions.

Taking one response from a company could be also a limitation. We had to evaluate firms in order to understand in which dimensions and how successful the company was according to one representative response and this may cause misleading information. It was compulsory; however, otherwise data collection would not be possible.

The number of variables in the questionnaire was quite high. Thus, we had to make factor analyses and this may hinder us to see some variables' single effects.

Furthermore, in this study perceived successes of the CRM in Internet companies have been measured, because measuring real success is not feasible. It is difficult for firms to answer direct questions which are related with customer retention, loyalty and profitability like "How many customers are affected from the

company's CRM activities and, as a result of this, continued their relationship with the firm?"

Finally, this study we examined the adoption and the implementation of customer relationship management (CRM) activities in Internet businesses in Turkey and explored the situation from the company side. New researches might be made from the customer side of this topic.

APPENDIX A
QUESTIONNAIRE (ENGLISH)

Questionnaire About The Adoption and Implementation of Customer Relationship Management (CRM) Activities in Internet Businesses in Turkey

This questionnaire study is realized in the context of the thesis "The Adoption and Implementation of Customer Relationship Management (CRM) Activities in Internet Businesses in Turkey" by Hülya Zaralı, who is a master student at Boğaziçi University, Management Information Systems Department under the advisory of Assist.Prof. Dr. Hânde Kimiloğlu. All the questions in the questionnaire must be answered completely so that they can be counted in the evaluation. Please indicate your choices by putting X in the box that best represents your company's situation. Stating your name is not required. Thank you for your contribution to our study.

For your questions and opinions:

Hülya Zaralı hulya.zarali@gmail.com

Hânde Kimiloğlu hande.kimiloglu@boun.edu.tr

PART I

1. In which area is your company doing business on the Internet?

| | |
|---------------------------------|--|
| E-Commerce | |
| Banking | |
| Airlines & Travel | |
| GSM Operators | |
| Cargo Company | |
| Insurance & Retirement | |
| Internet Service Provider (ISP) | |
| Vacation-Tourism | |

Other (please specify): _____

2. For how long has your company been doing business on the Internet?

| | |
|-------------------|--|
| 0-1 years | |
| 2-3 years | |
| 4-5 years | |
| More than 5 years | |

3. How many people work in your company in the context of Internet business?

| | |
|---------------|--|
| 0-10 | |
| 11-50 | |
| 51-100 | |
| More than 100 | |

4. Please state the approximate number of customers your company has on the Internet environment: _____

5. Please state your company's market share in its sector: % _____

7. How much annual revenues does your firm make from the products/services sold through the Internet?: _____
(If you do not sell any products/services online, please do not answer this question).

8. Please state your position in the company : _____

6. Which scale best describes your company?

| | |
|----------------------------|--|
| a) Large scale enterprise | |
| b) Medium scale enterprise | |
| c) Small scale enterprise | |

Figure A.1. Questionnaire

PART II

9. Which alternative represents your method of acquiring a CRM system?

| | |
|--|--|
| a) There is no CRM system in our company. | |
| b) We developed our CRM system in-house. | |
| c) We purchased it from a system provider. Which Firm?: | |
| d) We purchased it from a system provider and adapted it to our company. | |
| e) Other (Please specify): | |

10. Please state the influence of the following factors in implementing a CRM system in your company.

| | Very Influential | Partially Influential | Not Very Influential | Not Influential At All |
|---|------------------|-----------------------|----------------------|------------------------|
| 1. The fact that CRM activities have been adopted by most competitors | | | | |
| 2. The fact that implementing CRM activities will result in cost reduction. | | | | |
| 3. The fact that implementing CRM activities will increase internal efficiency in the company. | | | | |
| 4. The fact that implementing CRM activities will increase customer satisfaction. | | | | |
| 5. The fact that implementing CRM activities are required in our field in order to keep up our innovativeness and continuous process improvement mission. | | | | |
| 6. The fact that implementing CRM activities will create financial gains for the company. | | | | |

PART III

11. Please state your agreement level with each of the following statements about CRM applications.

| | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|-------------------|----------|-------|----------------|
| Our site includes all relevant content about the products/services that we offer. | | | | |
| The information about our products/services is presented in an easily accessible style. | | | | |
| In our site, even a first time user can easily complete his/her work. | | | | |
| Our site has been designed in style that offers easy navigation within the site. | | | | |
| Our site has an aesthetic and interesting design. | | | | |
| Our users have rapid access to our site and can complete their tasks quickly within the site on fast-loading pages. | | | | |
| Our site has a technological infrastructure which supports traffic at busy times. | | | | |
| It is necessary to be a good computer user to use our site. | | | | |
| Users can complete many tasks with a minimum number of steps on our site. | | | | |
| All links on the site work in a correct and proper way. | | | | |
| Various security precautions are used during transactions on our site. | | | | |
| Better security systems should be used on our site. | | | | |

Figure A.1. Questionnaire (continued)

| | Strongly Disagree | Disagree | Agree | Strongly Agree |
|--|-------------------|----------|-------|----------------|
| On our site, questions and help requests are answered very quickly. | | | | |
| It is easy to access our site from other sites and search engines. | | | | |
| Our site has an appropriate domain name. | | | | |
| Our site has a domain name that is easy to keep in memory. | | | | |
| Our site has a simple and understandable language. | | | | |
| Our site is often updated. | | | | |
| Our site can be personalized. | | | | |
| On our site, an efficient customer registration system is used. | | | | |
| Our site gets located in prior results in major search engines. | | | | |
| Our site works properly in all browsers (Internet Explorer, Mozilla Firefox, etc.). | | | | |
| Our site has "interactive" elements that enhance communication between the company and the user. | | | | |

PART IV
12. Please state your application frequency of the following CRM activities/methods.

| | Always | Vary Often | Sometimes | Never |
|--|--------|------------|-----------|-------|
| Recognizing customers who enter the site | | | | |
| Sending SMS/e-mails or giving calls on special days (birthdays, Mother's day, Valentine's day, etc.) | | | | |
| Making discounts to customers on special days (birthdays, Mother's day, Valentine's day, etc.) | | | | |
| Offering campaigns appropriate to customer groups | | | | |
| Sending personal SMS/e-mail or making personal promotions to customers | | | | |
| Making offers to customers according to previous usage and preferences | | | | |
| Offering various payment alternatives (credit card, money order, etc.) to customers | | | | |
| Providing 24-hour online support to customers | | | | |
| Necessity of customers' registration | | | | |
| Offering free services according to the degree of customer loyalty/profitability | | | | |
| Making suggestions to customers-based on their predicted buying behavior | | | | |
| Offering the opportunity to personalize the site | | | | |
| Providing special gains for customers according to the type and frequency of services they use (gaining extra money/discounts, etc.) | | | | |
| Ensuring process endings in security | | | | |
| Offering various security options (SMS approval, password provider, etc.) | | | | |
| Producing one-to-one solutions in a short time in case of customer complaint | | | | |

Figure A.1. Questionnaire (continued)

| | Always | Very Often | Some times | Never |
|--|--------|------------|------------|-------|
| Offering the opportunity for customers to follow their orders/services/activities online | | | | |
| Offering various contact information about the company on the site | | | | |
| Offering online consultancy and guidance to the customers on the site | | | | |
| Informing customers about new campaigns and services by e-mail | | | | |
| Informing customers about new campaigns and services by SMS | | | | |

PART V
13. Which of these e-CRM communication channels are available on your site?

| |
|-----------------------------------|
| postal address |
| e-mail address |
| telephone number |
| fax number |
| Frequently Asked Questions (FAQs) |
| message/request/complaint forms |
| chat rooms |
| mail lists |
| newsgroups |
| forum |
| online meeting/support |
| voice message system |
| video conferencing |
| electronic conference |

PART VI
14. Please state how much improvement your company has experienced in the following areas by implementing CRM activities.

| | Very Obvious | Partially Obvious | Not Very Obvious | Not Obvious At all |
|---|--------------|-------------------|------------------|--------------------|
| The recognition of our company/brand in the online environment has increased. | | | | |
| The reliability of our company/brand in the online environment has increased. | | | | |
| The perception of our company as a high-tech/innovative brand has improved. | | | | |
| The pre-sale services offered to customers were strengthened. | | | | |
| The support offered to customers during the selling process is strengthened. | | | | |
| The post-sale services offered to customers were strengthened. | | | | |
| The total customer number has increased. | | | | |

Figure A.1. Questionnaire (continued)

| | Very Obvious | Partially Obvious | Not Very Obvious | Not Obvious At all |
|--|--------------|-------------------|------------------|--------------------|
| The number of newly acquired customers has increased. | | | | |
| The customer acquisition cost has decreased. | | | | |
| The ratio of reuse/repurchase of services offered on the site has increased. | | | | |
| The reacquisition of lost customers has increased. | | | | |
| The process of service completion/delivery is shortened. | | | | |
| Effective customer databases have been created. | | | | |
| The contribution to the correct determination of target markets has increased. | | | | |
| The databases are more effectively used to develop various marketing methods and strategies. | | | | |
| Customer satisfaction has increased. | | | | |
| Customer transaction frequency has increased. | | | | |
| Customer transaction amount has increased. | | | | |
| The usage rate of processes/services provided on the site has increased. | | | | |
| The time customers spend on the site has increased. | | | | |
| Conveying complaints to the related people have become easier and accelerated. | | | | |
| The ratio of the solutions provided to the complaints of customers has improved. | | | | |
| The willingness of customers to provide extra information (questionnaire, etc.) has increased. | | | | |
| The usage of help/support systems on the site has increased. | | | | |

15. Please state how much improvement your company has experienced in the following areas by implementing CRM activities.

| | Very Obvious | Partially Obvious | Not Very Obvious | Not Obvious At all |
|---|--------------|-------------------|------------------|--------------------|
| The usage of technology in the company has increased and improved. | | | | |
| The quality of help/support systems on the site has increased. | | | | |
| The variety of help/support systems (e-mail, online consultancy, etc.) on the site has increased. | | | | |
| The frequency of updating used software has increased. | | | | |
| The usage rate of new technology compared to competitors has increased. | | | | |
| The business processes in the organization have speeded up and become more effective. | | | | |
| The security of business processes in the organization has increased. | | | | |
| The content management of the site has improved. | | | | |

Figure A.1. Questionnaire (continued)

16. Please state how much improvement your company has experienced in the following areas by implementing CRM activities.

| | Very Obvious | Partially Obvious | Not Very Obvious | Not Obvious At all |
|--|--------------|-------------------|------------------|--------------------|
| The present services are continuously developed and renewed. | | | | |
| The ratio of developing new services has increased. | | | | |

17. Please state how much improvement your company has experienced in the following areas by implementing CRM activities.

| | Very Obvious | Partially Obvious | Not Very Obvious | Not Obvious At all |
|--|--------------|-------------------|------------------|--------------------|
| The contribution of online services/sales to the profitability of the company has increased. | | | | |
| The contribution of online products to the protection/development of market share has increased. | | | | |
| Operational costs have decreased. | | | | |
| Promotional costs (printing and delivery cost, etc.) have decreased. | | | | |
| Customer support systems' costs (FAQs, online help, online user groups, etc.) have decreased. | | | | |
| The annual sales gained from loyal customers have increased. | | | | |
| The number of profitable customers has increased. | | | | |
| Customer life-time value has increased. | | | | |

PART VII

17. Please state how much improvement your company has experienced in the following areas by implementing CRM activities by attributing each dimension a percent value over 100.

| | |
|---------------------------|---|
| Customer satisfaction | % |
| Internal efficiency | % |
| Technology and innovation | % |
| Financial performance | % |

+ _____
100%

19. Please state your perception about the level of success of CRM activities in your company.

| | |
|-------------------------|--|
| a) Very Successful | |
| b) Quite Successful | |
| c) Partially Successful | |
| d) Not Very Successful | |
| e) Unsuccessful | |

Figure A.1. Questionnaire (continued)

APPENDIX B
QUESTIONNAIRE (TURKISH)

Türkiye'de İnternet'te Faaliyet Gösteren Firmalarda Müşteri İlişkileri Yönetimi (CRM) Uygulamaları Anketi

Bu anket çalışması, *Boğaziçi Üniversitesi Yönetim Sistemleri Bölümü* Yüksek Lisans öğrencisi Hülya ZARALI tarafından, Yrd. Doç. Dr. Hande KİMLİ OĞLU'nun danışmanlığında yürütülen "*Türkiye'de İnternet'te Faaliyet Gösteren Firmalarda Müşteri İlişkileri Yönetimi (CRM) Uygulamaları*" konulu tez çalışması kapsamında gerçekleştirilmiştir. Anketinizin değerlendirilmeye alınabilmesi için tüm soruların eksiksiz yanıtlanmış olması gerekmektedir. Lütfen seçiminizi uygun kutuya X koyarak belirtiniz. İsim belirtmeniz istenmemektedir. Çalışmamıza katkıda bulunduğunuz için teşekkür ederiz.

Soru ya da görüşleriniz için:
Hülya Zaralı hulya.zarali@gmail.com
Hande Kimlioğlu hande.kimliglu@booun.edu.tr

I. BÖLÜM

1. Firmanız İnternet'te aşağıdaki alanlardan hangisinde faaliyet göstermektedir? 2. Firmanız İnternet ortamında kaç yıldır faaliyet göstermektedir?

| | |
|---------------------------------|--|
| E-Ticaret | |
| Bankacılık | |
| Havayolları-Ulaşım | |
| GSM Operatörü | |
| Kargo Şirketi | |
| Sigorta-Emlaklık | |
| ISP (İnternet Servis Sağlayıcı) | |
| Tatil-Gezi Şirketleri | |

| | |
|----------------|--|
| 0-1 yıl | |
| 2-3 yıl | |
| 4-5 yıl | |
| 5 yıldan fazla | |

3. Firmanızda İnternet faaliyetleri kapsamında kaç kişi çalışmaktadır?

| | |
|--------------|--|
| 0-10 | |
| 11 ile 50 | |
| 51 ile 100 | |
| 100den fazla | |

Diğer (lütfen belirtiniz):

4. Firmamız İnternet ortamında ki yaklaşık müşteri sayısını belirtiniz: _____

5. Firmamız sektördeki pazar payını belirtiniz: % _____

6. Firmamızın İnternet yoluyla ürün/hizmet satışlarından elde ettiği yıllık gelir ortalaması ne kadardır?: _____
(Ürün/ Hizmet satışı yapılmıyorsa bu soruyu yanıtlamayınız)

7. Firmadaki pozisyonunuz/ görevinizi belirtiniz: _____

6. Firmanızı örnek bakımından değerlendirilebilir misiniz?

| | |
|----------------------------------|--|
| a) Büyük ölçekli bir işletmedir. | |
| b) Orta ölçekli bir işletmedir. | |
| c) Küçük ölçekli bir işletmedir. | |

Figure B.1. Turkish questionnaire

II. BÖLÜM

9. Aşağıdaki seçeneklerden hangisi CRM uygulamaları sisteminizi edinme şeklinizi ifade eder.

| |
|---|
| a) Bir CRM sistemimiz yok |
| b) Kurum içinde geliştirdik. |
| c) Sistem sağlayıcılardan satın aldık. Hangi Firma?: |
| d) Sistem sağlayıcılardan satın aldık ve kurum için adapte ettik. |
| e) Diğer (Lütfen belirtiniz): |

10. CRM uygulamalarını benimsemenizle aşağıdaki her bir faktörün ne derece etkili olduğunu belirtiniz

| | Çok Etkili | Kısmen Etkili | Az Etkili | Hiç Etkili Değil |
|--|------------|---------------|-----------|------------------|
| 1. Bu uygulamaların başlıca rakiplerimiz tarafından benimsenmiş olması | | | | |
| 2. Bu uygulamaların maliyet düşürme avantajı sağlayacak olması | | | | |
| 3. Bu uygulamaların kurum içi verimliliği arttıracak olması | | | | |
| 4. Bu uygulamaların müşteri memnuniyetini arttıracak olması | | | | |
| 5. Bu uygulamaların alanımızdaki yenilikçilik ve sürekli iyileştirme misyonumuzun gerekliliği olması | | | | |
| 6. Bu uygulamaların kurumumuza finansal açıdan kazanç sağlayacak olması | | | | |

III. BÖLÜM

11. CRM uygulamalarınızla ilgili aşağıdaki yargılara ne derece katıldığınızı belirtiniz

| | Kesinlikle katılmıyorum | Katılmıyorum | Katılıyorum | Kesinlikle katılıyorum |
|--|-------------------------|--------------|-------------|------------------------|
| Sitemiz sunduğumuz Ürün/hizmet(ler)le ilgili gerekli tüm bilgileri içermektedir. | | | | |
| Sitemizde ürün/ hizmetlerimizle ilgili bilgiler kullanıcının kolaylıkla ulaşabileceği biçimde sunulmuştur. | | | | |
| Sitemize ilk kez gelen bir kullanıcı yapmak istediği işi kolaylıkla tamamlayabilir. | | | | |
| Sitemiz kullanıcıların navigasyonu(site içinde gezinmesi) açısından etkin biçimde tasarlanmıştır. | | | | |
| Sitemizin tasarımı estetik ve ilgi çekicidir. | | | | |
| Kullanıcılarımız beklemeden sitemize ulaşarak işlemlerini hızlı açılan sayfalarda yapabilmektedirler. | | | | |
| Sitemiz yoğun saatlerdeki trafiği kaldırabilecek teknolojik altyapıya sahiptir. | | | | |
| Sitemizdeki işlemleri yapabilmek için iyi bir bilgisayar kullanıcısı olmak gerekir. | | | | |
| Kullanıcılar sitemizde birçok işlemi mümkün olan en az adımda gerçekleştirebilmektedirler. | | | | |
| Sitemizde yer alan bütün köprüler (linkler) düzgün ve sorunsuz çalışmaktadır. | | | | |
| Sitemizde işlemleri yaparken çeşitli güvenlik önlemleri kullanılmaktadır. | | | | |
| Sitemizde daha etkin güvenlik sistemleri kullanılmaktadır. | | | | |

Figure B.1. Turkish questionnaire (continued)

| | Her Zaman | Çok Sık | Bazen | Hiçbir zaman |
|---|-----------|---------|-------|--------------|
| Müşterilerin siparişlerini / hizmetleri / işlemlerini ağırlıklı olarak internetten takip edebilmesi | | | | |
| Site de firmaya ulaşılabilirlik çeşitli iletişim bilgilerinin sunulması | | | | |
| Site de müşterilere online danışmanlık hizmetlerinin sunulması | | | | |
| Müşterileri yeni kampanya ve hizmetler konusunda e- posta yoluyla bilgilendirme | | | | |
| Müşterileri yeni kampanya ve hizmetler konusunda SMS yoluyla bilgilendirme | | | | |

13. Aşağıdaki e-CRM iletişim kanallarında n sitemizde yer alanlarımı işaretleyiniz.

| | |
|-------------------------------|--|
| iletişim adresi | |
| e-mail adresi | |
| te le fon numarası | |
| faks numarası | |
| sık sorulan sorular(sss) | |
| mesaj /talep/şikayet formları | |
| sohbet odası | |
| mail listesi | |
| haber gurupları | |
| forum | |
| online görüşme/ destek | |
| sesli mesaj sistemi | |
| video konferans | |
| elektronik konferans | |

14. CRM uygulamalarınızın kurumunuza aşağıdaki kriterler açısından ne derece fayda sağladığını belirtiniz.

V.BÖLÜM

| | Çok Belirgin | Kısmen Belirgin | Fazla Belirgin Değil | Hiç Belirgin Değil |
|--|--------------|-----------------|----------------------|--------------------|
| Kurumunuzun Markanızın elektronik ortamdaki varlığının bilinirliği artmıştır. | | | | |
| Kurumunuzun Markanızın elektronik ortamdaki güvenirliliği artmıştır. | | | | |
| Kurumunuzun yüksek/leri teknoloji kullanan bir marka olarak algılanmasına katkı sağlamıştır. | | | | |
| Müşterilerimize sağlanan satış öncesi hizmetleri güçlenmiştir. | | | | |
| Müşterilere satın alma sırasında sağlanan destek artmıştır. | | | | |
| Müşterilere sağlanan satın alma / işlem sonrası destek artmıştır. | | | | |
| Toplam kullanıcı sayısı artmıştır. | | | | |

Figure B.1. Turkish questionnaire (continued)

| | Çok Belirgin | Kısmen Belirgin | Pek Belirgin Değil | Hiç Belirgin Değil |
|--|--------------|-----------------|--------------------|--------------------|
| Kazanılan yeni müşteri sayısı artmıştır. | | | | |
| Müşteri kazanma maliyetinde düşüş olmuştur. | | | | |
| Müşterilerin site de sunulan hizmetleri tekrar kullanma/satın alma oranı artmıştır. | | | | |
| Bir nedenle siteyi kullanmaya bırakmış müşterilerin yeniden kazanımı artmıştır. | | | | |
| Hizmetin ulaştırılması/tamamlanması süreci kısalmıştır. | | | | |
| Etkili müşteri veritabanları oluşturulmuştur. | | | | |
| Hedef pazarların doğru biçimde belirlenmesine katkı sağlamıştır. | | | | |
| Veritabanları değişik müşteriler için farklı pazarlama yöntem ve stratejileri geliştirmek için kullanılmıştır. | | | | |
| Müşteri memnuniyeti artmıştır. | | | | |
| Müşteri işlem sıklığı artmıştır. | | | | |
| Müşteri işlem miktarı artmıştır. | | | | |
| Müşterilerin site içindeki çeşitli hizmetleri/işlemleri kullanma oranı artmıştır. | | | | |
| Müşteriler site içinde daha fazla zaman geçirmeye başlamıştır. | | | | |
| Müşteriler tarafından şikayetlerin bilgileri ile tiplebilmesi hızlanmıştır/kolaylaşmıştır. | | | | |
| Müşteri şikayetlerine çözüm getirme oranında gelişme olmuştur. | | | | |
| Müşterilerin firma tarafından istenen ekstra bilgileri sağlamadaki istekliliği(site ile ilgili anket soruları vb.) | | | | |
| Site içi yardım/destek hizmetlerinin kullanımı artmıştır. | | | | |

15. CRM uygulamalarınızın kurumunuza aşağıdaki kriterler açısından ne derece fayda sağladığını belirtiniz

| | Çok Belirgin | Kısmen Belirgin | Pek Belirgin Değil | Hiç Belirgin Değil |
|--|--------------|-----------------|--------------------|--------------------|
| Kurumumuzda teknolojinin kullanımı artmıştır/gelişmiştir. | | | | |
| Site içinde yer alan yardım/destek hizmetlerinin kalitesi artmıştır. | | | | |
| Site içinde yer alan yardım/destek hizmetlerinin çeşitliliği (e-mail, danışma hatb, anında yanıt sistemi vs.) artmıştır. | | | | |
| Kullanılan yazılımların güncellenme sıklığı artmıştır. | | | | |
| Rakip kurumlara göre yeni teknolojileri kullanma oranı artmıştır. | | | | |
| Kurumumuzda kullanılan iş süreçleri etkinleştirilmiş/hızlanmıştır. | | | | |
| Kurumumuzda kullanılan iş süreçlerinin güvenliği artmıştır. | | | | |
| Sitemizin içerik yönetimi geliştirilmiştir. | | | | |

Figure B.1. Turkish questionnaire (continued)

16. CRM uygulamalarınızın kurumunuza aşağıdaki kriterler açısından ne derece fayda sağladığını belirtiniz.

| | Çok Belirgin | Kısmen Belirgin | Pek Belirgin Değil | Hiç Belirgin Değil |
|---|--------------|-----------------|--------------------|--------------------|
| Mevcut hizmetler sürekli geliştirilmekte/yenilenmektedir. | | | | |
| Yeni hizmetler geliştirme oranı artmıştır. | | | | |

17. CRM uygulamalarınızın kurumunuza aşağıdaki kriterler açısından ne derece fayda sağladığını belirtiniz.

| | Çok Belirgin | Kısmen Belirgin | Pek Belirgin Değil | Hiç Belirgin Değil |
|--|--------------|-----------------|--------------------|--------------------|
| Elektronik ortamdaki (online) hizmetlerin satışların karlılığına katkısı artmıştır. | | | | |
| Elektronik ortamdaki (online) ürünlerin pazar payımızı korumaya/ geliştirmeye katkısı artmıştır. | | | | |
| Kurumumuzun operasyonel maliyetleri düşmüştür. | | | | |
| Promosyona yönelik maliyetler düşmüştür. (basım ve dağıtım maliyetleri vb.) | | | | |
| Müşteri destek sistemleri maliyetleri düşmüştür. (SSS, Online destek, online user groups vb.) | | | | |
| Sadık müşterilerden kazanılan yıllık satış artmıştır. | | | | |
| Firmaya daha fazla gelir/kar kazandıran müşteriler sayısı artmıştır. | | | | |
| Müşteri yaşam boyu değeri artmıştır. | | | | |

18. Firmanızdaki CRM uygulamalarınızın aşağıdaki boyutlardan her biri açısından size ne derece faydalı olduğunu 100 puan üzerinden değerler vererek belirtiniz.

| | |
|---------------------------|---|
| Müşteri memnuniyeti | % |
| Kurum içi verimlilik | % |
| Teknoloji ve yenilikçilik | % |
| Finansal performans | % |
| + | |
| 100% | |

19. Firmanızdaki CRM uygulamalarınızın ne derece başarılı gördüğünüzü belirtiniz.

| | |
|-----------------------|--|
| a) Çok Başarılı | |
| b) Oldukça Başarılı | |
| c) Kısmen Başarılı | |
| d) Pek Başarılı Değil | |
| e) Hiç Başarılı Değil | |

Figure B.1. Turkish questionnaire (continued)

APPENDIX C

ADDITIONAL RESEARCH RESULTS

Table C.1 - Number of Customers on the Internet Environment

| Approximate Number of Customers | Frequency | Percent % |
|---------------------------------|-----------|-----------|
| 30 | 3 | 3.66 |
| 45 | 1 | 1.22 |
| 50 | 3 | 3.66 |
| 100 | 1 | 1.22 |
| 150 | 1 | 1.22 |
| 200 | 1 | 1.22 |
| 250 | 3 | 3.66 |
| 390 | 1 | 1.22 |
| 450 | 1 | 1.22 |
| 500 | 1 | 1.22 |
| 695 | 1 | 1.22 |
| 1,000 | 4 | 4.88 |
| 2,000 | 3 | 3.66 |
| 2,300 | 1 | 1.22 |
| 2,800 | 1 | 1.22 |
| 3,000 | 2 | 2.44 |
| 4,200 | 1 | 1.22 |
| 5,000 | 2 | 2.44 |
| 6,000 | 1 | 1.22 |
| 7,000 | 1 | 1.22 |
| 10,000 | 2 | 2.44 |
| 20,000 | 1 | 1.22 |
| 30,000 | 2 | 2.44 |
| 40,000 | 1 | 1.22 |
| 50,000 | 3 | 3.66 |
| 100,000 | 2 | 2.44 |
| 200,000 | 4 | 4.88 |
| 210,000 | 1 | 1.22 |
| 250,000 | 1 | 1.22 |
| 300,000 | 1 | 1.22 |
| 350,000 | 1 | 1.22 |
| 500,000 | 1 | 1.22 |
| 700,000 | 1 | 1.22 |
| 750,000 | 1 | 1.22 |
| 985,000 | 1 | 1.22 |
| 3,000,000 | 1 | 1.22 |
| 8,000,000 | 1 | 1.22 |
| 10,000,000 | 1 | 1.22 |
| 15,000,000 | 1 | 1.22 |

Table C.2 - Company's Market Share in Its Sector

| Market Share of the Company | Frequency | Percent % |
|-----------------------------|-----------|-----------|
| 1 | 6 | 7.41 |
| 2 | 6 | 7.41 |
| 3 | 4 | 4.94 |
| 4 | 4 | 4.94 |
| 5 | 4 | 4.94 |
| 6 | 1 | 1.23 |
| 6.8 | 1 | 1.23 |
| 8 | 1 | 1.23 |
| 10 | 2 | 2.47 |
| 15 | 6 | 7.41 |
| 17 | 1 | 1.23 |
| 20 | 1 | 1.23 |
| 25 | 3 | 3.70 |
| 30 | 3 | 3.70 |
| 35 | 2 | 2.47 |
| 40 | 1 | 1.23 |
| 46 | 1 | 1.23 |
| 50 | 1 | 1.23 |
| 58 | 1 | 1.23 |
| 60 | 1 | 1.23 |
| 85 | 1 | 1.23 |
| 90 | 1 | 1.23 |
| missing | 29 | 35.80 |

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