THE EFFECTS OF INFORMATION TECHNOLOGY ON CUSTOMER RELATIONSHIP MANAGEMENT: A CASE STUDY OF ORGANIZATION OF SPORTS AND YOUTH OF GILAN PROVINCE

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Abstract. Today, in order to establish a proper channel of communication with customers, organizations utilize modern methods in the realm of Information Technology (*IT*). *IT* is considered to be one of dominant aspects of Customer Relationship Management (*CRM*). The objective of the present research is to study the effects of *IT* on organizational *CRM* mechanism of sports and youth organization of Gilan Province.

Research Methodology: This study is a descriptive field research, whose data are accumulated through utilization of customized questionnaires. Research statistical population and sample are considered to be the same, which includes 44 research volunteers. Research data are analyzed through utilization of descriptive statistics and Pearson's correlation coefficient.

Findings: Utilization of *IT* results in more efficient communication with customers and there exists statistical significance between computerized communication and *CRM*. On the other hand, there exists no statistical significance between utilization of online computerized software applications and services and *CRM* mechanisms.

Conclusion: *IT* is considered to be one of dominant factors in facilitating competitive capacities of an organization. Therefore, with high level of *IT* utilization in organizations, *CRM* mechanisms will be facilitated.

Keywords: Information Technology (*IT*), Customer Relationship Management (*CRM*)

INTRODUCTION

Rapid development of information and communication technologies has brought manifold accomplishments for mankind, affecting their lives and social behaviors. One of such astonishing accomplishments is the facilitation of information availability, resulting in public intellectual preferment. Through such preferment, social requirements and acquisition, including civic, social,

legal, cultural and personal necessities, will be promoted. These requirements should be obviated through private and public sectors. In Iran, public sector acquires determining role in facilitating social and civic requirements of natural and legal individuals (Motaminejad and Gudarzi, 2010). Therefore, the importance of *IT* and its effects for public organizations are considered to set their utmost priorities and as a result, there have been considerable advancements in this field within the recent years. It is believed that *IT* facilitates efficiency of an organization, resulting in spending cuts (Kagan). The international community lives in an era where *IT* is regarded to be the most important factor in growth and development. In today's intricately dynamic organizational environments, the importance of *IT* in different arenas is magnified sophisticatedly. *IT* plays a vital role in creating communicative channel between different sectors of an organization and technologies such as cell phones, internet, web technologies, faxing facilities, landlines and text messages are considered to be those determining facilities that establish true meaning of communication in an organization or an operational bureau (Mohammadi and Mosharrafjavadi, 2012). Today, *IT* is considered the pivot of development, effectuating private and public sectors directly or indirectly. These effects are tangible in manifold aspects of political, cultural, economic and social arenas. Therefore, the ways one lives, fulfills his social duties and spends his leisure time have been transformed radically (Mirrokni and Rezayee, 2011).

Organizations are utilizing modern *IT* technologies in *CRM* mechanisms, since this field like any other economic, cultural and social one should undergo dynamic technological advancement in order to become amenable to customers' requirements in today's interactive world. *IT* in *CRM* will facilitate its efficiency by economizing temporal and financial factors in the purveyed services (Sarrafizade and Lotfizade, 2007).

Generally, facilities, provided by utilization of *IT* infrastructures in *CRM* mechanisms can be manifested as follows:

◦ Instance communicative channels can be established through electronic mailing systems between officials and executive administers and customers inside and outside of organizations.
◦ Latest news and information, regarding Iran's athletic arenas, can be provided in a world wide scale.
◦ Question and answer services (*Q & A*) can be utilized in investigative fields and journalistic arenas. These journalistic arenas include sports magazines, visual and auditory tutorials and documentaries which assists executive administers in sports and youth organizations in their decisions making process.

It is worth mentioning that utilization of *IT* in management sectors economized temporal factors, resulting in facilitation of statistical efficiency in organizations (Mohammadi and Mosharrafjavadi, 2012). Therefore, accomplishing ideal organizational development rate depends on the level of their creativity. In today's world, organizations are obliged to deliver their services creatively so that they can survive in the competition by utilizing trenchant communicative channels with their customers (Motaminejad and Gudarzi, 2010). Organizations should utilize *IT* as a resource for

accessing and analyzing their relevant data. With facilitation of *IT* in organizational environments, accumulation, storage, analysis and recovery of data will be utilized. It is worth mentioning the *IT* this paper is referring to is the manifestation of those technologies that facilitates electronic analysis, storage and transaction of relevant data of an organization. The hardware applications that support such electronic interface include: computers, information network facilities, data transfer facilities such as faxing mechanisms and cell phones. In the modern era, organizations emphasize on the importance of information in their infrastructures. Considering information as the new vestige of power, the holder of such totem will be considered a determining factor in international transactions.

Mutability of environmental variables depicts the importance of information in the twenty first century (Mohammadnejad). Customer Relationship Management (*CRM*) is defined as the manifestation of methodologies, mechanisms and software applications that are established in various institutions and firms so that communicative channels between organizational officials and customers can be utilized (Rezayeemalek and Radfar, 2001). *CRM* is an integrated system that is utilized for planning, scheduling and controlling financial transactions of an organization. Such a condition will enable customers in establishing proper communicative channels with organizations (Farajpur, 2008). *CRM* is considered to be the most efficient and dominant mechanism in facilitating communicative channels for customers. *CRM* includes three important components: customer, communication and management. Customer is considered as the financial and development resource of an organization. Of course, recognition, imbibition and preservation of ideal customers are becoming difficult day by day due to the facilitated level of customers' knowledge in the competitive world. Therefore, ideal recognition and management of customers should be established through utilization of intelligent *IT* mechanism (Karimi, 2008).

IT includes four fundamental factors: man power, mechanism, infrastructure and instrumentation. In *IT*, information is in flow of a value chain, objectifying organizational development and advancement continuously. Man power includes human resources, intelligence and creativity. Mechanism includes regulations and developmental, rating and financial methodologies. Instrumentation includes software and hardware applications, network and communication.

Infrastructure includes organizational and cross-organizational structures. It is worth mentioning that many believes that computers and informatics could be regarded interchangeable with *IT* mechanism, however, it should be noted that computers and informatics manifests *IT* instrumentations and do not represent its totality (Sarrafizade and Lotfizade, 2007).

The following factors are regarded in this research as the facilitators of organizational incomes:

Communication: It establishes an efficient relationship between internal and external elements of an organization and customers.
Efficiency: Facilitation of the efficiency of the organizational activities should be utilized through automatic modification of feedback reports. Furthermore, information availability should be

propitiated without any temporal and spatial constrictors alongside with the possibility for customers to deliver their orders and requests electronically without the necessity to establish any kind of direct face-to-face communication with organizational officials.

Decision Making: Proper data accumulation facilitates automatization of data reports for decision making processes of executive administers. These reports are purveyed on the basis of organizational statistics and a surgical perspective from customers' status, their requests and orders and their requirements. Furthermore, proper marketing schemes will be provided for executive administers through utilization of such reports (Hadizadeh et al, 2011).

IT is considered as an instrumentation that facilitates the ideal growth rate in financial transactions, resulting in the redefinition of their infrastructures (Mohammadnejad). *IT* assists its users through simplification of a financial transaction and through utilization of creative methodologies, a number of communicative channels can be established between the organization and its potential customers, shareholders and financial suppliers (Motaminejad and Gudarzi, 2010). *CRM* includes manifold *IT* technologies including data accumulation and analysis, utilization of interactive customer-based patterns, analysis of customers' behavioral codes, development of speculative models and operation of proper reaction to the customers through utilization of effective communicative channels (Fateh and Keshvari, 2011).

IT can provide executive administers with data that can assist them in customer recognitions. Therefore, a proper *CRM* mechanism must include *IT* methodologies, making accumulated data applicable in determining the economy rate of imbition, preservation and temporal value of customers (Farajpur 2008).

IT and *CRM* are dependant to each other. *IT* is regarded as the operator whose product is a series of communicative channels. Therefore, both of them are regarded as strategic resources for any organization in the twenty first century and recent developments depict that those organizations that utilize proper communicative channels are considered to be the victors of the competition in imbition and preservation of their customers. *IT* as a technological field of knowledge plays an important role in data accumulation and analysis in *CRM* mechanisms. Therefore, correlative administers can harmonize and monitor financial transactions with much les man power, resulting in dwindling of bureaucratic preoccupations. Researchers believe that organizational staff members acquire a general positive and welcoming attitude towards *IT* methodologies, resulting in their overall emphasis on *CRM* mechanisms. They consider technological advancements as proper instructional infrastructures in organizational environments.

Today, if organizations do not deliver their services in a Web Style manner, they will lose international marketplace definitely. Furthermore, information availability, temporal frugality, proper scheduling, preservation of customer-based interfaces and operation of electronic service centers through emailing systems, landlines and internet will be jeopardized without acquiring a proper decision making mechanism through utilization of *IT* methodologies.

IT advancements develop investigative environments in marketing arenas. It is worth mentioning that a considerable number studies have been administered regarding utilization of *IT* methodologies in *CRM*. It is proper for any researcher to acquire information from a rich research background and through having access to numerous databases; he could acquire a deeper understanding of his field of study.

The results of studies depict that executive administers in Physical Education Organization and National Olympic Committee acquire positive attitude towards utilization of *IT* systems (Honari, 2002). In 36 rich industrial countries, studies depict that there exists a positive statistical significance between *IT* and growth and efficiency rates. At the same, there exists no such statistical significance in developing countries (Padmanabhan and Tuzhilin, 2007). In an online survey regarding the role of *IT* technologies in *CRM* mechanisms, it is depicted that *CRM* will not cause in abdication of traditional marketing schemes, but at the same time, it will strengthen their capacities (Jarrahi et al. 2009). Unfortunately in Iran, utilization of *IT* methodologies in organizational environments is poor, depicting that utmost importance should be focused on *IT* methodologies as determining mechanism in fulfilling organizational objectives (Afraze, 2006). In recent studies regarding *IT* mechanisms, it is divulged that utilization of *IT* methodologies in organizational environments will result in facilitated information and service delivery through sophistication of eentrepreneurial culture. For instance, due to lack of electronic resources in data bases and websites of National Olympic Committee and Gymnastics Federation, these organizations are in a disadvantageous position.

In another study regarding effective factors in implementation of *IT* methodologies, it is depicted that there exists an inclination between the arts students to utilize *IT* mechanisms in heir learning procedures (Lim and Ting, 2012). Therefore, researchers believe that *IT* is the vital factor in organizational creativity that curbs inefficient activities and finances (Tarafda, 2007). In another study, whose purport is to study economic value of effects of *IT* mechanisms, information automatization and transformation are studied (Mooney and Kraemer, 1996). Furthermore, this study deduces that utilization of *IT* resources as an external organizational factor in online interfaces will result in facilitation of communicative channels and organizations (Legris and Collerette, 2003). The ultimate finding of the aforementioned research is that there exists no statistical significance between *IT* mechanisms and organizational infrastructures (Moghimi and Hosseinzade, 2013). In another study, researchers utilize investigations regarding the role of *IT* methodologies in *CRM* mechanisms. They deduce that the level of success of an organization depends on establishing trenchant communicative channels between organizational interfaces and customers. In this view, the traditional notion of *CRM* has been revolutionized through dynamic development of *IT* methodologies. In this revolution, *CRM* mechanisms are utilized as an organizational information system that commingle *IT* methodologies in marketing and service delivery procedures so that information and communicative requirements of an organization can be met (Taboli and Purjafari, 2009).

In another study, effective factors on online sports fan clubs are recognized in sports websites and it is depicted that there exists a penchant inclination among sports fans to become users of interactive web sites (Hur and Claussen, 2012). In today's *IT* world, utilization of software applications in *CRM* interfaces curbs finances in data analysis procedures which economizes temporal factors in establishing communicative channels between organizations and their customers. Furthermore, competitive nature of organizations in establishing such channels will be facilitated (Heidari and Mahmoodi, 2011).

As observed, the effects of *IT* methodologies in *CRM* interfaces and marketing schemes have been studied and it is deducted that a revolutionized structure of marketing scheme is the result of utilization of a web style technology (Lederer et al. 2001).

Therefore, the research question of the present research lies in studying the effects of *IT* on organizational *CRM* mechanism. It is evident that *IT* is regarded as the operator whose product is a series of communicative channels. With no reliance on *IT* instrumentations and information devices, communication is impossible. Proper utilization of *IT* methodologies in *CRM* interfaces can obviate those problems, whose solutions are not confined in mere financial and economic succors.

Research Methodology
The present study is a descriptive applied research whose methodology is considered to be on the basis of survey courses.

Statistical population is the active staff members of sports and youth organization of Gilan Province, whose statistical density is 44. 44 questionnaires are distributed among the members of the population. 40 questionnaires out of 44 are filled and ultimately considered in the value assessment of the study, constituting the statistical sample of the research.

Research data are accumulated by customized questionnaires, whose fundaments are solidified through utilization of documentary research methods. Each questionnaire includes 28 questions and 6 questions are involved directly with organizational *CRM* interfaces. Answering procedure is administered through utilization of Likert Scale. Furthermore, some of the demographic information including age, organizational rank and background and academic education are accumulated through the questionnaires.

In order to assess reliability of the questionnaire ─ which indicates integrity and reliability of the statistical experiments in manifold implementations ─ Cronbach's Alpha is utilized as the most common test for assessing statistical association of the questionnaire. The calculated alpha for all the research variables indicates a percentage of 82. A percentage of 80 is considered for the questionnaire itself, indicating an acceptable level of statistical association.

In order to analyze research data and calculate statistical indexes such as frequency, descriptive statistics is utilized. Furthermore, Pearson's product moment correlation test is utilized in statistical inference of the study so that presence or absence of statistical significance between research variables can be observed. It is worth mentioning that statistical operations of this study are administered through utilization of SPSS software application.

Research Findings

Frequency index, alongside with its standard level and cumulative percentage are calculated. 56/1% of the statistical population are executive administers and 43/9% of them are employees. Organizational background of 39% of the population acquire 10 years organizational experience, 36/6% of them acquire 11-20 years experience and 24/4% have 21-30 years experience in organizational environments. 9/8% of the population have high school diploma, 31/7% acquire associate degree, 31/7% have Bachelor's degree and 26/8% acquire Masters. In order to calculate age, number of statistical samples, mean, standard deviation, variance, median, maximum and minimum quantities are considered a 73 years old and a 27 years old employee so that a mean of 41/51 years can be deduced. 61/68 is considered to be the number of hours an employee spends working with computers. A scale of 1 to 4 is dedicated to the quantitative and qualitative factors, regarding utilization of computers, resulting in a mean of 2/37. A scale of 1 to 4 is dedicated to the quantitative and qualitative factors, regarding utilization of software applications, resulting in a mean of 1/76. A scale of 1 to 4 is dedicated to the quantitative and qualitative factors, regarding utilization of online interfaces, resulting in a mean of 1/97. A scale of 1 to 5 is dedicated to the quantitative and qualitative factors, regarding utilization of *CRM* interfaces, resulting in a mean of 3/64. In order to observe the level of statistical normality of variables, Kolmogorov–Smirnov test is utilized. The null hypothesis is equated with the normal distribution of variables. If the statistical significance is more than 0/05, the null hypothesis will be confirmed, indicating the variable distribution is normal. According the calculated statistical significances, all the research variables are normal.

	Kolomogerov smirnov z	Most extreme Differences			Normal parameters		N	(Asymp-sing (2tailed
		Negative	positive	Absolute	Std. Deviation	Mean		
The Level of Utilization of Computers	630.	73.-	09.8	.098	.66007	2.3693	41	822
The Level of Utilization of Software Application	1.142.	-125.	17.8	.178	.53892	1.7610	41	147
The Level of Utilization of	922.	-077.	14.4	.144	.53431	1.9652	41	362

Online Interfaces								
The Level of Availability of Internet Services	926.	-145.	14.5	.145	.45433	2.0081	41	357
CRM Interface	1.089.	-119.	17.0	170.	6726.7	3.6383	41	186

Table No. 1

Research Hypotheses

In order to test the research hypotheses, Pearson's product-moment correlation test is utilized. The null hypothesis is regarded as the lack of any correlation between the variables.

There exist a statistical significance between the utilization of computers and *CRM* interfaces. Pearson's correlation coefficient is 0/298 and statistical significance is 0/059 and since the level of statistical significance is more than 0/05, the independency of effects of each research variable is not negated. In other words, there exist a statistical significance between the utilization of computers and *CRM* interfaces.

There exist no statistical significance between the level of utilization of software applications and *CRM* interfaces. Pearson's correlation coefficient is 0/139 and statistical significance is 0/384 and since the level of statistical significance is more than 0/05, the independency of effects of each research variable is not negated. In other words, there exist no statistical significance between the utilization of software applications and *CRM* interfaces.

There exist no statistical significance between the utilization of online interfaces and *CRM* interfaces. Pearson's correlation coefficient is 0/178 and statistical significance is 0/266 and since the level of statistical significance is more than 0/05, the independency of effects of each research variable is not negated. In other words, there exist no statistical significance between the utilization of online interfaces and *CRM* interfaces.

There exist no statistical significance between the availability of internet services and *CRM* interfaces. Pearson's correlation coefficient is 0/049 and statistical significance is 0/759 and since the level of statistical significance is more than 0/05, the independency of effects of each research variable is not negated. In other words, there exist no statistical significance between the availability of internet services and *CRM* interfaces.

Research Variables	The Level of Availability of Internet Services	The Level of Utilization of Online Interfaces	The Level of Utilization of Software Application	CRM Interface	CRM Interface

The Level of Utilization of Computers	.457**	.586**	Statistical Significance	The Level of Utilization of Computers	.469**
The Level of Utilization of Online Interfaces	.003	.000	Correlation Coefficient		.002
The Level of Utilization of Online Interfaces	41	41	N		41
The Level of Availability of Internet Services	.568**		Statistical Significance	The Level of Utilization of Online Interfaces	.342*
CRM Interface	.000		Correlation Coefficient		.029
41	41		N		41
.667**			Statistical Significance	The Level of Utilization of Online Interfaces	.667**
.000			Correlation Coefficient		.000
41			N		41
			Statistical Significance	The Level of Availability of Internet Services	
			Correlation Coefficient		
			N		
			Statistical Significance	CRM Interface	
			Correlation Coefficient		
			N		

Table No. 2

Now, what are the speculative factors of *CRM*?

Regression test is utilized so that the effectuality of various factors on *CRM* interface can be observed. The coefficient (which should be between 0 and 1) in this test is appointed 0/126, depicting the variance of the model. The more the coefficient acquires propinquity to 0, the stronger the statistical significance is between the variables. One of the postulations of regression test is that the variables should not acquire self autocorrelation and their deviations should be independent of each other. These postulations are tested through utilization of Durbin Watson test

and a statistical value of 1.91 is appointed and since the statistical outcome is between 1.5 to 2.5, it is deduced that variables do not acquire self autocorrelation and their deviations are independent of each other. In order to have statistical significance in the regression test, there should be a linear relationship between speculative variables and criterion variable. In order to test such relationship, F-test is utilized. Statistical significance of this test is appointed 0/289 and since it is more than 0/05, it depicts that there exists no linear relationship between criterion variable and speculative variables. In other words, regression test acquires no statistical significance when it comes to these variables.

Model	R	R square	Adjusted R square	Std. Error of the Estimate	Durbin-watson
1	35.5[a]	126.	029.	66284.	1.910

Table No. 3 Model Summary

Model	Sum of squares	Df	Mean square	F	Sing.
1 Regression	2.282	4	571.	1.299	289.[a]
Residual	15.817	36	439.		
Total	18.099	40			

Table No. 5 ANOVA

Model	T	Standardized Coefficients	Non Standard Coefficients		Sig.
		Beta	B	Std. Error	
level of utilization of computers	6.026	.383	.522	3.146	.000
level of utilization of software application	1.863	-141.	210.	390.	071.
level of utilization of online services	654	247.	269.	-176.	517.
level of availability of internet	1.034	-247.	310	311	3.8.
269.CRM interfaces	-1.122.		326.	-336.	269.

Table No. 6 Coefficients

CONCLUSION

Financing in *IT* is of utmost importance in organizations, resulting in considerable spending cuts. It can generate competitive advantages for an organization (Moafi, 2012). *IT* instrumentations are adapted so that efficient mechanisms in economic transactions can be accomplished. With the efficient utilization of *IT,* customers can be administered on the basis of knowledge management schemes and trenchant communicative channels. Therefore, *CRM* interfaces requires vital support of *IT* mechanisms (Hur and Claussen, 2012).

The results of the present study depict that there exist a statistical significance between the utilization of computers and *CRM* interfaces. Pearson's correlation coefficient is 0/298 and statistical significance is 0/059. There exist no statistical significance between the level of utilization of software applications and *CRM* interfaces. Pearson's correlation coefficient is 0/139 and statistical significance is 0/384. There exist no statistical significance between the utilization of online interfaces and *CRM* interfaces. Pearson's correlation coefficient is 0/178 and statistical significance is 0/266. There exist no statistical significance between the availability of internet services and *CRM* interfaces. Pearson's correlation coefficient is 0/049 and statistical significance is 0/759. All of the aforementioned statistical results are depicted in the table number 2. Generally in it deduced that with sophisticated utilization of *IT* in organizational environments, customer management will be facilitated.

The results of the present study depict that there exist a statistical significance between the utilization of computers and *CRM* interfaces. Similar kind of finding and positive attitude towards *IT* mechanisms exists in the studies by Honari (2002), Padmanabhan (2003), Jarahi (2009), Benitez (2000) and Sidin (2000). At the same time, there exists no correlation with the results of the present study and those of Hosseinzade (2008), Robinson (2007), Gordon (2007) and Dastranj (1999). Such lack of correlation is the result of officials' reluctance in accepting *IT* mechanisms and regarding them as overbearing duties. Another reason for such a situation is the usual efficiency rate of manual mechanism in the studied organizations that is considered the normal pace for customer management processes. Of course, it is worth mentioning that even the normal pace of manual bureaucracy could not regarded as an isolated factor from the effects of computers and modern technologies.

The results of the present study depict that there exist no statistical significance between the level of utilization of software applications and *CRM* interfaces. This finding is in correlation with those

of Hosseinzade (2008), robinson (2007), Mooney (1996), Afraze (2006), Nasrollahi (2008), Badriazin (2006), Dastranj (1999) and Heidari (2011). These studies report low utilization of *IT* mechanisms in organizational environments. at the same time, there exists no correlation with the aforementioned finding of the present study and those of Hur (2012), Lederer (2001), Abbasi and Torkamani (2010), Taboli (2009) and Dehghotboddini (2010). The reason for such lack of correlation can be the fact that the statistical population of the aforementioned studies includes students of computer studies that are considered to acquire educated opinions regarding implementation of *IT* mechanisms. As a result, when it comes to efficient implementation of software applications and online services in *CRM* interfaces, the level of academic education is of utmost importance.

Ultimately, it can be deducted that implementation of *IT* mechanisms in organizational environments are not considerably high. Therefore, a number of strategies should be planned so that economic transactions, organizational functions and customer management can become efficient.

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