Study relationship between usage marketing metrics from innovation view and achievement of objective for customer relationship management based on Gartner's model

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ABSTRACT

The aim of this research was to investigate the relationship between marketing metrics from innovation view and achievement of objective for customer relationship management is based on Gartner's model in Isfahan' city Sepah Bank. The theoretical framework was provided based on Gartner's model In this study was surveyed by a questionnaire includes 61 item for samples of 160 managers and assistants in Sepah bank. The main idea of this paper is whether marketing metrics from innovation view and achievement of objective for customer relationship management are related? This study method is applied research from purpose view and descriptive survey method of field research. The model was tested by using LISREL and SPSS software. The results show a direct and positive relationship between marketing metrics from innovation view and achievement of objective for customer relationship management (two sides). According the research findings are related between components of metrics Innovation (New services, New services launches, Satisfaction from new services, Revenue of new services) and customer relationship management. However, There is no relationship between revenue of new services and customer relationship management. The value fitted indexes of the model (GFI=0.91 and AGFI=0.89) is Indicative the suitability of the model.

Introduction

Measurement is critical to the health of any business, and Marketing Metrics highlights key tools and techniques across many measurement landscapes from the consumer, to the sales force, to the ever-changing media environment (Farris, et al., 2006). In recently year, Practitioners and academics have shown increasing interest in the assessment of marketing performance (Clark 1999; Ambler, et al., 2004), Because Measuring marketing performance has been a central concern in marketing for decades (Clark, 1999). The Marketing Science Institute has raised marketing metrics to become its leading capital research project (MSI 2002). Despite the importance of assessing business performance there is little research on the measures used to evaluate marketing effectiveness (Ambler & Wang, 2003). Given that a firm's survival depends on its capacity to create value, and value is defined by customers, marketing makes a fundamental contribution to long-term business success (Ambler & Wang, 2003). Therefore evaluating marketing performance is a key task for management. However, businesses that concern themselves with rigorous evaluation of marketing results are in the minority (Ambler, 2000). Given the importance of innovation as an engine of growth,(cooper, et al., 1995), it is surprising that many companies don't measure their innovativeness (muller et al, 2005).

Kokkinaki and Ambler (1999), for instance, deduced that marketing metrics can be summarized into six categories: 1) financial measures, 2) measures of competitive market, 3) measures of consumer behavior 4) measure of consumer intermediate 5) measures of direct customer 6) measures of innovativeness .

In this research, focused on how Iranian Banks used marketing metrics from innovation view (innovation metrics) as tools for effectivness of customer relationship management.

innovation metrics are important for at least two reasons. First, metrics help managers make informed decisions based on objective data, which is especially valuable given the long-term nature and risk associated with certain innovation projects. Second, metrics affect behavior by helping align goals and actions with the best interests of the company(Hauser & Zettelmeyer, 1997). Therefore, following the definition of marketing as "what the whole company does to achieve customer preference and, thereby, its own goals"(Webster, 1992: 1-17).

Accordingly, every business has some interest in assessing marketing in this sense (Ambler, 2000).

Today, key customers as a valuable asset meaning an important source of new product/service ideas, and requires a dedicated focus on key customers (Li, 2010).

So companies try to use unique strategies to current customers maintain and loyalty instead of acquiring new customers who call for more investments. Increased competition and declining loyalty Led to the emergence of concepts focusing on the development of relationships with customer (Ryals, et al., 2000).

On the other hand, nowadays customer relationship management is one of the growing trends in the banking

industry, Especially in changing environments with high investment in technology that is spent in order to maintain customer satisfaction. In today competitive markets has seen aggressive competition between banks over the past and the banks has driven a finance competitive toward, customer oriented competition. Application of customer orientation strategic plans through Marketing Metrics from innovation view for achievement of objectives of customer relationship management in banks to establish a long term relationship and thereby helps to increase their revenues. Marketing metrics provides evidence of customer experiences. We quantify customer service delivery. We provide Customer Experience Management tools so customer loyalty can be measured. The researchers in this paper to determine the conditions that propagate using marketing metrics In Term of Innovation and effectiveness for customer relationship management based on GARTNER model. Accordingly, the aim of this study is to determine whether the relationship between marketing metrics from innovation view and achievement of objectives for customer relationship management to apply situation contingency?

Literature review on innovation metrics

The measurement of marketing activities and actions is complex, encompassing both objective and subjective measures. Early approaches to marketing measurement in the 1950s essentially had an econometric background and focused on establishing the product price that would maximize the financial outcome, given a forecasted demand (Clark, 1951; William, 1953). in recent years, managers and scholars had Significant attention to Marketing metrics. From a managerial perspective, Senior managers would seek to quantify marketing performance (Amble, et al., 2001), In this study, have been paid the theoretical aspects of Selecting marketing metrics that by Ambler, et al., (2004) discussed with four theoretical perspectives: control, agency, institutional. the First aspect, According to control theory which is supposed that management has a strategy and a known set of intermediary stages with which actual performance can be compared (Ambler, 2001). Metrics selection is an essentially rational process by which "marketing managers can learn to improve performance by altering the utility levels associated with marketing control variables" (Ambler, et al., 2004: 475-498). Thus control theory assumes that management establishes goals of whatever type. Having done that the metrics necessary to compare goals with performance are defined (Ambler, et al., 2004: 477). the Second aspect, that expresses with institutional theory: Institutional theory shows that organizational action is mainly driven by both the cultural values and the history of the specific company, as well as by those of its industry sector (Meyer & Rowan, 1977; Ambler, et al., 2004). institutional theory which suggests that metrics will be selected, or perhaps evolve, according to the cultural norms of businesses and the sectors within which they operate" (Ambler, et al., 2001). agency theory that focuses on contract between a principle and an agent and the need for ex-post data on the extent to which the principal's objectives have been met (Jensen & Meckling, 1976; Li, 2010), agency theory provide the third aspect of selecting metrics, but this but this requires the interaction between two levels of management (Ambler, et al., 2001), Market orientation is an ideology that places the highest priority on the creation and maintenance of superior customer value, and that urges employees to develop and exploit market information (Narver & Slater, 1990; Jaworski

& Kohli, 1993). Finally, Finally, orientation theory suggests that the choice of metrics will be influenced by the way top management perceives its business. A more market oriented business is likely to seek more market metrics (Ambler, et al., 2001). Thus, According , Ambler, et al., (2001) in Assessing Market Performance's paper, the metrics they select reflect such a partial view and strategy can perhaps be inferred from what managers measure.

In this study used marketing metrics from innovation view (innovation metrics) as tools for effectiveness of customer relationship management. Considering that Marketing metrics from innovation view (innovation metrics) is the focus of attention of this investigation, refers to gathering of data on marketing campaigns, channels, treatments and customer responses in order to track the effectiveness of customer relationship management (CRM) activities (Hirschowitz, 2001; Li, 2010).

A metric is a measuring system that quantifies a trend, dynamic, or characteristic. In virtually all disciplines, practitioners use metrics to explain phenomena, diagnose causes, share findings, and project the results of future events. Today, numerical fluency is a crucial skill for every business leader. Managers must quantify market opportunities and competitive threats to be able to justify the financial risks and benefits of their decisions, For this reason, they require metrics (Farris, et al., 2006, 1-44). A 'metric' is a performance measure that top management should review. It is a measure that matters to the whole business. The term comes from music and implies regularity: the reviews should typically take place yearly or half-yearly. A metric is not just another word for measure while all metrics are measures, not all measures are metrics. Metrics should be necessary, precise, consistent and sufficient (ie comprehensive) for review purposes (Ambler, 2000). According to Table 1 Marketing Metrics is divided into six categories, each of these metrics are used to measurement specific cases (Kokkinaki &Ambler, 1999).

1) financial measures (i.e. turnover, contribution margins, and profits)
2) measures of competitive market (i.e. market share, advertising share, and promotion share)
3) measures of consumer behavior (i.e. customer penetration, customer loyalty, and new customers gained)
4) measure of consumer intermediate (i.e. brand recognition, satisfaction, and purchase intention)
5) measures of direct customer (i.e. distribution level, profitability of intermediaries, and quality of service)
6) measures of innovativeness (i.e. new products launched and revenue of these products as a percentage of total turnover)

Table 1: marketing metrics categories
Source: (Kokkinaki & Ambler, 1999)

Different metrics should complementary and substitute. Along with the identification of different types of marketing metrics, the focus of interest gradually shifted from traditional aggregate performance measures (such as market share, sales or profits) to performance indictors measured at the individual customer level (Li, 2010, 139–148; Kotler & Keller, 2006). Environmental dynamics, such as the fierce competition companies face in the marketplace, require the development of measurement indicators that enable managers to make better and more informed marketing investment decisions (Leeflang, et al., 2009; Kornelis, et al., 2008). Unlike most other forms of business measurement, innovation metrics present problems for

the process that has to be measured (morris, 2011: chap 6) Innovation, which some see as the lifeblood of marketing, is least regularly measured (Ambler, et al., 2001).

The necessity of innovation metrics

Because innovation is a widely recognized as a critical requirement for virtually all companies across all industries, the metrics imperative is here. Leaders must establish a new breed of metrics that move beyond conventional measures and that:

• Create an organizational environment that supports and drives strategic innovation

• Establish critical capabilities tuned to the evolving competitive business landscape

• Evaluate innovation efforts to ensure both return on investment and support feedback loops of learning and improvement (Kaplan & Winby, 2007).

The measurement of innovation is likely to be difficult due to the broad nature of the scope of innovative activities. One method of trying to assess innovation is to make the distinction between the outputs of innovative activity and the inputs to innovative activity (Rogers, 1998: 9).

It is under is described classification of innovative activities that are organized into two groups of input and output.

Input of innovation metrics

Innovation involves the combination of inputs in the creation of outputs. Something novel is created during innovation (Stone, et al., 2008; Rose, et al., 2009). Innovation activities draw on a variety of inputs, which can be both tangible and intangible (Table 2).Tangible inputs have a physical embodiment and cost but Intangible inputs do not have a physical embodiment (Rose, et al., 2009; Lev, 2001) but may have a cost(Rose, et al., 2009). Tangible and Intangible Inputs are considered assets if they engender future benefits (Lev, 2001).

Tangible Assets	Intangible Assets
Knowledge embodied in technologies	Organizational processes
Information and communications	Knowledge and skills of labor force
technology infrastructure	R&D

Table 2. Tangible and intangible assets.
Source: (Rose, et al., 2009)

Knowledge is as a key input to innovation. Innovation involves the application of knowledge in creative activities. Innovation cannot take place without an understanding of the resources, tools, technologies, materials, markets, and needs in the situation at hand (Stone, et al., 2008; Rose, et al., 2009). These innovative activities could lead to tangible outputs (new or products, Revenue of new products, New product launches) or intangible ones (Satisfaction from new products, Innovations in future).

Output of innovation metrics

Ultimately, the key output measure of innovative activity is the success of the firm. Firm success can be proxied by profits, revenue growth, share performance, market capitalisation or productivity, amongst other indicators. All of these indicators have drawbacks (Rogers, 1998), the outputs of the innovation system significantly enhance the brand. They accelerate the acquisition of new customers, contracts, and/or clients, as measured by the "rate of new customer acquisition." This is evident in new sales to new customers (morris, 2011: chap 6). Innovation Metrics provide strategic direction for innovation activities within the business and guide the allocation of resources (Fulford, 2011). Innovation indicators extracted from

Ambler's article are considered as output of innovation metrics, including new services, revenue of new services, new services launches, satisfaction from new services (Ambler, 2001: 48), the use of which helps to the achievement of objective for customer relationship management significantly.

A Framework for Innovation Metrics

Fig. 1 The framework for innovation metrics attempts to create a simple solution to a complex challenge. With the assumption that successful innovation is the result of the synergies between a number of complementary success factors, our model incorporates two core principles:

• Creating a "family of metrics" is essential for ensuring a well-rounded portfolio of measures

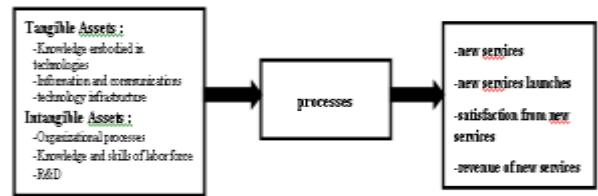• Including both "input metrics" and "output metrics"(Muller, et al., 2005).

Fig. 1. A framework for innovation metrics
Source: (Rose, et al., 2009)

presents some sample metrics as both inputs and outputs views in the innovation framework as well as for innovation processes. Inputs measure the resources that the company is allocating to innovation. Outputs measure the company's success at innovation.Managers need to measure both inputs and outputs. Measurement of just resource inputs might lull the company into believing that trying harder and continuous improvement deserve validation (Muller, et al.,2005).

Relationship between marketing metrics & effectiveness of Customer relationship management

The main goal of using marketing metrics is to prove the spending resources of the firm on marketing initiatives and identify the need of customers in order to improve (Criado & Turkenich, 2011). All these metrics are related with customers, their opinion and recognition which can be crucial for not only sales revenues but also for firm's value.

Customer satisfaction has proved to have a positive and significant impact on shareholder value (Luo and Homburg 2007). In addition to customers, marketing activities also have similar impact on other stakeholders such as employees, shareholders and stock analysts (Ambler, et al., 2002).

Marketing actions both create and leverage market-based assets. Market impact concerns reactions to the customer impact resulting in positional advantages (Rust, et al. 2004).

Researchers in business markets argue the effective management of customer relationships requires a thorough understanding of customer profitability starting at the individual account (Bowman & Narayandas, 2004).

Two themes in the literature of CRM are of particular relevance to this research: knowledge of the antecedents of CRM effort and the conclusions that have so far been drawn about the impact of CRM effort on performance of CRM programs.With regard to antecedents that may influence level of CRM effort, organizational characteristics consisting of culture, configuration, and strategy have been reported. Taking the organizational culture perspective, previous researchers have identified market orientation as a critical predictor of marketing metrics (Ambler & Wang, 2003; Kokkinaki & Ambler, 1999).

The rising importance of measuring marketing metrics at the individual account level, this study seeks to capture the construct of marketing metrics by examining the actual usage of measures of innovativeness when assessing performance at an individual customer level.

Conceptual Framework of Research

According to the literature, Fig. 2 is a conceptual model of research.

dependant variable
achievement of objectives for CRM Based on GARTNER Model
1. CRM vision: Leadership, Social worth, Value proposition
2. CRM strategy: Objectives, Segments, Effective interaction
3. Valued customer experience Understand Requirements Monitor Expectations Satisfaction vs. Competition Collaboration and Feedback / 4. Organizational collaboration Culture and Structure Customer Understanding People: Skills, Competencies Incentives and Compensation Employee Communications Partners and Suppliers
5. CRM processes: Customer life cycle, Knowledge management
6. CRM information: Data, Analysis, One view across channels
7. CRM technology: Applications, Architecture, Infrastructure
8. CRM metrics: Cost to serve, Satisfaction, Loyalty, Social costs

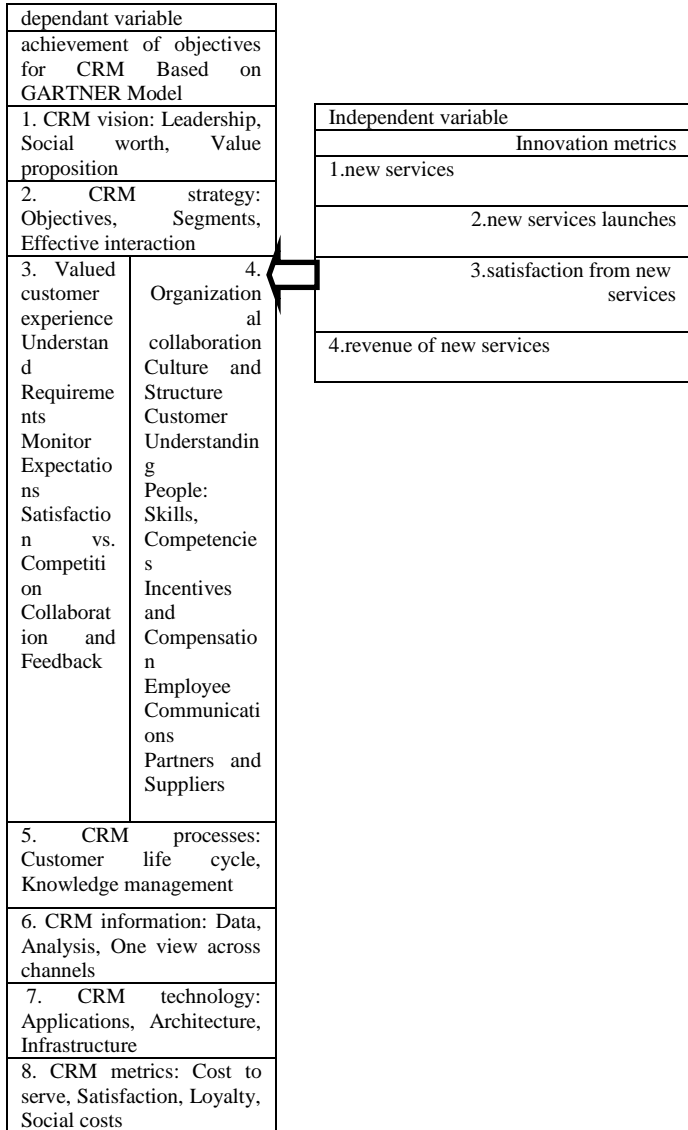| Independent variable |
| --- |
| Innovation metrics |
| 1.new services |
| 2.new services launches |
| 3.satisfaction from new services |
| 4.revenue of new services |

Fig. 2. A conceptual model for the use of marketing metrics from innovation view and achievement of objectives for customer relationship management

Source: compiled by researchers

Research methodology

This present study is a application research. The method of data collection has been different in various stages of research. In order to develop theoretical foundations of research library studies and Internet resources have been used.

The data needed to prove this hypothesis and the relationship between variables was collected using a questionnaire.

Based on the Kolmogorov Smirnov test was normal statistical population and It should be noted the validity have been helped from university professors and PhD students.

According to the conceptual model, the research hypotheses include:

Main hypothesis

H1:

It seems between the marketing metrics from innovation view is significantly associated with effectiveness of customer relationship management.

Sub hypotheses

H2:

It seems between the new services is significantly associated with customer relationship management.

H3:

It seems between new services launches is significantly associated with customer relationship management relationship exists.

H4:

It seems between satisfaction from new services is significantly associated with customer relationship management

H5:

It seems between revenue of new services and is significantly associated with customer relationship management

Statistical population, samples and sampling method

Statistical population of this study are the branches of Sepah Banks of Isfahan city sampling Has been done by simple random sampling. Number of 172 questionnaires were distributed among managers and assistants Sepah Banks of Isfahan city, that 160 questionnaires were returned. The questionnaire return rate was 93 percent.

Data collection tool

Data collection tool have made by two questionnaires that are used 28 questions for measure marketing metrics from innovation view and 33 questions for achievement of objectives for customer relationship management.

Survey Reliability and validity of the questionnaire

For the validity have been helped from university professors and PhD students. of university. According to Table 3 Reliability was calculated through Cronbach alpha of 0.81.

Components	Average	Standard deviation	Cronbach alpha
New services	3.1	0.55	0.81
New services launches	3.9	0.88	0.81
Satisfaction from new services	3.1	0.82	0.82
Revenue of new services	2.56	0.68	0.70
Customer Relationship Management	3.4	0.73	0.76

Table 3 - The amount of components reliability

Analysis of data

In order to evaluate suggested model structural equations approach was used. All analyzes were performed using 8.5 the LISREL software. the adequacy of the fitted suggested model have been determined by using several indicators of fitness tests. Chi-square value, Chi-square normalized index (the ratio of the chi-square to degrees of freedom), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Which is based on the correlation between the variables in the model, Increase the Fitness Index (IFI) was developed to compare the proposed model with the independence model, *Tucker-Lewis Index* (TLI) To compare two or more different

models with the same data and or compare the proposed model with a null model, and the Root Mean Square Error of Approximation (RMSEA) is based on the analysis of the residual matrix,Which can be estimated based on the estimates for the various confidence intervals.

Finding

In Table 4, status statistical sample are presented in terms of demographic variables such as gender, age and education.

demographic variables	Variable levels	Number	Percent
Gender	**Man**	**134**	**83**
	Woman	**26**	**17**
Age	**30-20**	**25**	**15**
	40-30	**64**	**40**
	50-40	**43**	**27**
	More than 50 years	28	17.5
Education	Diploma	26	17
	Associate Degree	43	26
	License	76	47
	Higher degree	15	9

Table 4 - status of statistical sample in terms of demographic variables

What is on the the table above, indicate that men are the majority of participated in this study. The highest average age is 30-40 years and the highest level of education is the bachelor's l

Explanation of dependent and independent variables

According to normal distribution in order to explain and interpret the variables one sample t-test with a test value equal to the number 3 (test value = 3) and 95% confidence interval error (5%) has been used. In the test, if the p-value is greater than value 0.05, studied variable is not significantly different with value the test (ie, number 3) and as a result, studied factor is moderate in statistical population, Whereas the p-value is less than 0.05, Variable is studied with the value test (ie, number 3) have Significant differences. According to Contents that mentioned and as can be seen in Table 2,there are new services and new services launches on The highest status and revenue of new services and CRM performance variables weakly (because the p-value of less than 0.05, And the average is less than 3) in the targeted sample Population.

Components	p-value	Average	Standard deviation	t test
New services	0.33	3.3	0.98	-2.1
New services launches	0.27	3.1	0.88	-1.34
Satisfaction from new services	0.43	3.02	0.87	-2.3
Revenue of new services	0.01	2.8	0.91	-4.4
Customer Relationship Management performance	0.002	2.64	0.90	-7.3

Table 5- Results of one sample t-test for research variables

Survey the relationship between the dependent and independentvariables of research by using multiple linear regression

After the survey hypotheses, now we will discuss simultaneously effect of independent variables on the dependent variable by using multiple regression and the method (stepwise).

dependant variable	Independent variable	ANOVA(sig)	Coefficient	R Square
Customer Relationship Management performance	New services	0.002	0.54	0.76
	New services launches	0.000	0.43	
	Satisfaction from new services	0.001	0.65	
	Revenue of new services	0.03	0.43	

Table 6 - Multiple regression test analysis between independent variables and CRM performance

Survey of effect of independent variables on the dependent

As can be seen in Table 3, the value of ANOVA (sig) for independent variables was less than 0.05 that Indicate is existence a linear relationship between the independent variables and CRM performance. the value of R square equal to 0.76 and shows that it is 0.76 CRM performance changes is affected by independent variables.

Structural Equation Model

To evaluate the proposed model Selection Method of structural equation model was used. Before studied the structural coefficients, fitness of the model was evaluated. coefficients and relations have been studied in Fig 3.
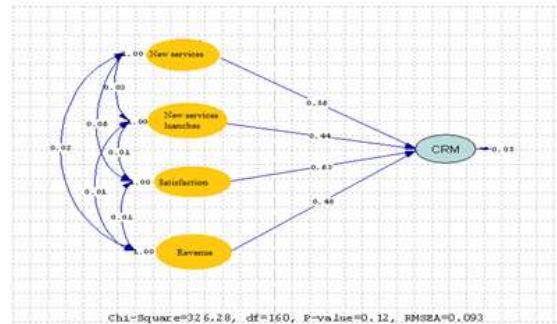

Chi-Square=326.28, df=160, P-value=0.12, RMSEA=0.093

Fig. 3. Fitted model of research

χ^2	DF	χ^2/df	GFI	AGFI	IFI	TLI	CFI	RSMEA
1	326.28	120	2.03	0.91	0.92	0.90	0.76	0.87	0.09

Table 7 - fitness index

to assess structural equation modeling There are several of the fitness indicators that are used in this research Include: The root mean square error of approximation , goodness of fit index, adjusted goodness of fit index.

The results of the above parameters are given in Table 7. The root mean square error of approximation for the good models close to zero. The models That the index for them is 0.1 or more have weak fitted. Confidence interval for this index can be calculated. Confidence interval can be calculated for this index. Ideally, the lower limit of the confidence interval is very close to zero and the upper limit is not very large. As can be observed in this model RMSEA is 0.09 Which can be said that is in good condition. Whatever GFI and AGF are closer to one, the model with data has fitted better.In this model, respectively two index are 0.91 and0.092 Which are indicative of good fitted to model.Thus, according to fitted indexes values of final model and boundaries acceptable values that mentioned above can be said that the final model presented in this study is acceptable.
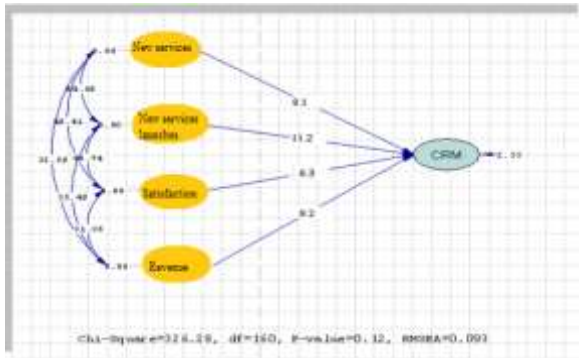
Fig. 4. Significant of research coefficients

Path coefficients between variables of the final model and their level of significance are shown in Table 8.

Item	Path		Standardized coefficient	Significant numbers
1	New services	CRM performance	0.56	8.1
2	New services launches	CRM performance	0.44	11.2
3	Satisfaction from new services	CRM performance	0.63	6.3
4	Revenue of new services	CRM performance	0.48	9.2

Table 8- Results of structural equation

Results of regression analysis concerned with affecting and affected variables shows that CRM performance is affected by all the independent variables to indicate the significance of each of the model parameters are used t-statistics. The statistics obtained from coefficients ratio each parameter in standard deviation error of Its parameters Which should be in t test greater than $2^{(t \geq 2)}$ and in Z-test is greater than $1.96^{(Z \geq 1/96)}$, so the estimates are statistically significant Considering output of LISREL (Fig. 4), rate of t is calculated in all of variables is greater than 2, so all the estimates provided are statistically significant.

Conclusions

In this paper the relationship between marketing metrics from the aspect of innovation and achievement of objectives of customer relationship management based on GARTNER model in Iranian banks was investigated. Components such as new services, New services launches, satisfaction from new services, Revenue of new services and customer relationship management were tested.Regression analysis results concerned path coefficient showed that these components are considerably affect with the influence on customer relationship management. What were determined the outcome, variable of satisfaction from new services among the other variables had the most effect on customer relationship management. In fact, Inform customers of the facilities that had created by bank was causing this. results of studies Ambler (2000), Kokkinaki & Ambler (1999), Barwise & Farley (2004), Farris, et al., (2006) and Li (2010) is similar with the results of the present study. According to what was said and Influencing marketing metrics on customer relationship management, today should be the most service organizations, This important The cornerstone of their strategy. Key to the

success of this strategy are depends on the success of applying the metrics and attention to the following items:

1. Considering appropriate landscape and strategy in customer relationship management
2. Attention to the culture, structure, understanding customers
3. process, information and Architecture of CRM

Research findings indicate that the first hypothesis, "relationship between the new service and customer relationship management" with factor coefficients 0.56 and a significant number of 1/8, there is a significant relationship. The second hypothesis, "relationship between to new services launches and customer relationship management" with the coefficient 0.44 Significant number 11.2 and the third hypothesis of the relationship between satisfaction from new services and customer relationship management with the coefficient 0.63 Significant number 6.3 and the fourth hypothesis, namely the relationship between revenue of new services and customer relationship management are related with the coefficient 0.48 Significant number 9.2.

Limitations and suggestions for future research

The limitations of this study could be cited to the extent of limited of resources. On the other hand, this issue was new for many of the Staff in the studied organization and they didn't have enough knowledge about it as a result participation in the study for completing questionnaire was faces some problems. Another considerable problem is limitation of spatial scope of this research.

Future suggestions include the following:

1. In future studies, researchers should further investigation from more variety views.
2. With the expanding the scope of studies to further understanding of this issue.
3. from other moderates and mediators variables is should be used like competitive market and consumer behavior.

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