Determining the Key Indicators Affecting Electronic Customer Relationship Management (e-CRM) Using an Integration of Balanced Scorecard and Fuzzy Screening Techniques (Case Study: Companies Covered by arsian Data-Processors Group)

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Abstract

Nowadays, increasing competition among companies and the huge cost of attracting new customers has led to companies seeking to retain existing customers rather than looking to attract new customers. These factors together have led to the emergence of customer relationship management. Thanks to the development of information and communication technology, especially the Internet, the use of customer relationship management has expanded and facilitated, and electronic customer relationship management has been formed. Customer Relationship Management (EMS) seeks to deepen and empower customer relationships by utilizing a variety of information and communication technologies such as websites. With the aim of identifying key indicators of performance and improving the performance of the Balanced Scorecard, this research paper has attempted to integrate it with Yager's Fuzzy screening technique. This integrated model was implemented to develop a balanced scorecard for customer relationship management evaluation of companies covered by Parsian Data-Processors Group. The scale of "very important" was set as an acceptable scale for going through the screening process and for agreeing between managers and experts on the most important indicators. The results showed that the five indicators of customer viewpoint including increasing customer support during Purchasing Process and Afterward, Increasing Brand Confidence and Credibility , Participating in the Online Environment, Enhancing Customer Service After Sales, Increasing Customer Satisfaction, Increasing Site Usage and Various Site Capabilities, the four indicators of learning and innovating viewpoint including continuous improvement and modernization of the company's current services, the ability to use the new technologies, knowledge management capabilities in the organization and the ability of the company to learn from the market and to react it, the four indicators of financial viewpoint including Increased profitability; Increased share of online sales, flexibility in financing and increased annual sales , and the four indicators of exchange (processes) viewpoint including increased software update, increased use of advanced technologies compared to competitors; increased and improved use of Technology and Increasing Diversity of Services Offered on the Site (E-mail) have extracted as Key Indicators of Balanced Card Relationship Management Evaluation.

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INTRODUCTION

The advent of e-commerce has led to dramatic changes in many aspects of the existing commerce, including the creation of new companies with new business models, business opportunities and Modern Business Processing Techniques, such that e-commerce has become an alternative to communications in the areas of sales, marketing and customer support. These changes have created a new type of competitive advantage for customer relationship management (especially by using network systems such as the Internet, Intranet and Extranet). To this end, organizations need to develop appropriate models for monitoring customer performance by analyzing, tracking and managing e-commerce events. On the other hand, today's complex and dynamic competitive market requires managers to make every effort to attract potential customers and retain actual customers. Customer and market needs assessment and balancing the two can be a proper solution for this important issue (Jonas, 2018). Researches have provided numerous models for this purpose; of these, customer relationship management has yielded good results in many studies. Also, improving communication channels has eliminated many of the problems. The combination of these two categories has made electronic customer relationship management as a revolution in the business industry for researchers and executives (Himanshu & Aggarwal, 2019). What is certain is that e-customer relationship management, like any other model, requires some requirements and infrastructures to demonstrate its capabilities. Therefore, the ability to measure the accuracy and precision of e-customer relationship management performance can provide managers with new perspectives in addition to helping to eliminate the disadvantages and deficiencies in this field. Accordingly, in the current study, while reviewing the existing extant literature, the Balanced Scorecard method was used to measure the performance of electronic customer relationship management considering its capabilities in performance evaluation.

RESEARCH LITERATURE

Although customer management is a significant and central issue in marketing science, its nature has not yet been widely accepted by theorists. In various ways, this view has been presented as a process, strategy, philosophy, capability or technological tool (Rasouli & Valmohammadi, 2019). From another perspective, Colne has stated that the customer relationship management "is a business strategy for achieving a long-term competitive advantage by optimizing the timing and quality of customer delivery and simultaneously extracting business value" (Mainela & Ulkuniemi, 2013); In other words, it's a kind of win-win strategy where customers and companies get what they want from each other through a stronger bond (Sigala, 2018). Also, from the conceptual evaluation point of view, in recent years, the customer relationship management has undergone many changes due to developments in the transfer and adoption of new technologies. Similarly, Hassan et al Describe customer relationship management as an integrated view of the three components of technology, people, process (Hassan et al., 2019).

In recent years, in order to achieve the highest performance, companies have been evaluating the performance of information technology applications and information systems projects, and have made huge investments due to its impressive results. With the introduction of information technology into the field of customer relationship management, assessing its capabilities will be critical for managers (Mainela& Ulkuniemi, 2013). Over the past decade, due to constant technological changes and the increasing number of products, global competition has grown rapidly, emphasizing the role of continuous improvement of organizational performance as a competitive and strategic requirement in many firms around the world. Today, organizations use a wide range of performance gauges to evaluate, control and improve their business processes to maintain and enhance their competitive advantage. This led to the development of multi-dimensional, integrated performance management systems that, according to Nobel

and colleagues, revolutionized performance measurement in the late 1980s. In this regard, Robert Kaplan and David Norton (1992) introduced a new management system as the "Balanced Scorecard", which aims to understand the requirements of modern organizations for effective strategy implementation and the creation of a comprehensive management and performance improvement system (Hladchenko, 2015). A balanced scorecard management system is a combination of performance evaluation criteria that includes past, current as well as future performance indicators; And puts non-financial measures alongside financial measures; such that this tool, in addition to the financial viewpoints, also includes the three viewpoints of customer, internal processes, and learning growth in the evaluation of the organization (Zahoor & and Sahaf, 2018). Evaluating the Implementation and Performance of Electronic Customer Relationship Management of products is the first step that a senior management of any manufacturing or Service Company should take in order to become aware of the ability of implementing Electronic Customer Relationship Management of products, and consequently, make decisions to remove, refine, improve and develop electronic customer relationship management process (Aggarwal & Aakash, 2018). Evaluating the implementation and performance of electronic customer relationship management requires the application of various techniques and approaches. In this research, the balanced card technique is used as a performance appraisal system due to its comprehensiveness (Chavan, 2009). Therefore, it is necessary to first develop a specific electronic customer relationship management evaluation card. Thus, by studying marketing and customer relationship management literature, the four viewpoint of finance, customer, learning - innovation, and exchange viewpoint (processes) were identified for the balanced scorecard. (Table 1)

With the development of a balanced card, researchers have combined it with various techniques, including fuzzy set theory, and applied it in a variety of fields to improve its performance as a comprehensive performance evaluation system. In this study, to improve the functionality of the balanced card, we have combined it with Yager's fuzzy screening technique. We should note that multi-indicators decision-making issues require the evaluation and determination of functional value of topics and phenomena under the study that need screening, identification and selection of key and important indicators of evaluation. Screening issues start with a large subset (X) of a set of possible options. The process of selecting a subset (A) from X is called the screening process. Screening issues, while characterized by minimal information, generally include the involvement of several people in the decision-making process. Of course, the reality of the minimum information on options and/or criteria makes the problem more complicated due to the limited operations needed to combine the views of several people. Yager has proposed a technique called the fuzzy screening system to manage this process, which can provide the necessary consensus by considering minimum information (Lack of detailed information in relation to the criteria) (yan & ma, 2015). The implementation of this technique only needs to provide a lingual preference with sequential scale. This feature enables decision-making team members to provide their own information about their satisfaction with the criteria / and with decision options in the form of lingual variables such as infinitely important, very important, relatively important, trivial, very trivial, and non-trivial. And the ability to operate on incorrect lingual preferences allows them to use resources with the least information relevant to the subject under consideration. In other words, each decision-maker expresses his or her opinion on the degree of importance of each criterion and also on the fulfillment of the criteria by the criterion. This evaluation is performed in the form of the qualitative scale elements defined in Table (1). Using such a scale provides a natural sequence of Sk . So for every h> k we have $S_h > S_k$ and the maximum and minimum are as follows: (Yager ,1993)

$$Max\ (S_h,\ S_K) = S_h \quad S_h > S_k \qquad (1)$$
$$Min\ (S_h,\ S_k) = S_k \quad S_h > S_k \qquad (2)$$

Table 1: indicators of each viewpoint of balanced scorecard Electronic customer relationship management

Dimensions	Indicators	Author(s)
Customer	Increasing awareness of brand-corporate online presence; Increasing brand- corporate trust and credibility in online environment; Enhancing perceptions of the company as a business; using advanced technologies; Enhancing customer pre-sale services; Increasing customer support created during and after the purchase process; Increasing the total number of users and the number of new customers; Reducing the cost of attracting new customers; Increasing the rate of repurchase or Reusing of the Services provided on the Site; Improving customer database; Improvement of the accurate determination of target markets; Increasing customer satisfaction; Increasing the frequency of customer interactions, increasing the rate of use of the various services and features of the site; Increasing the rate of handling and resolving customer complaints and answering users' questions; Increasing the use rate of support services on the site; Exchange viewpoint (Processes); Increasing the quality of support and support services provided on the site; increasing the variety of services provided on the site, (emails, essential telephones, quick response systems); Enhancing the use of software updates; Increasing the use of advanced technology over competitors; Deploying business processes much faster and more effectively; Increasing the capability of business processes used in the company; Improving the Site Content Management	Rasouli & Valmohammadi,2019; Limand& Srai, 2018;Aggarwal & Aakash 2018Sharma& Aggarwal, 2019Bhati et al, 2017;Choshin& Ghaffari, 2017;Wang, 2008; Kabir& Akhtar ,2011;Brown and Jayakody,2008;Choshin& Ghaffari, 2017;Delone& Mclean, 2004;Hidayanto et al,2017;Molla& Licker, 2001;Tam et al,2019;Chiu& Cho, 2019;Hua et ak,2019;Kremez et ak,2019Eduardsen, 2018;Faraoni et al,2019;Alzahrani,2019;Tamet al,2019;Li& Xie,2012;Andonova, 2003;Li, & Xie, 2012,Sharma& Lijuan, 2015;Hua, 2016;Statish & Tedj ,2004Tan, et al,2002;Ab Hamid& Kassim, 2004;Bull, 2003;Hamill& Stevenson, 2002;Hande & Hülya ,2009;Hassan & Tibbits, 2000;Jarrahi,2005;Kaplan& Norton,,2001;Karakostas et al,2005;Ko et al,2008;Liu,et al,2006;.
Learning and Innovation	Continuous improvement and modernization of the existing services of the company; Increasing the rate of development of new services, the ability to use new technologies; The ability of the company to understand and respond to the market; Knowledge management capability in the organization; flexibility against competitors strategy; utilizing scientific and technical ability of trusted partners; developing partnerships and collaborating with companies	Martinson et al,1999Payne& Cantor,2000Kremez et ak,2019Eduardsen, 2018;Faraoni et al,2019;Alzahrani,2019;Tamet al,2019;Li& Xie,2012;Andonova, 2003;Li, & Xie, 2012,Sharma& Lijuan, 2015;Hua, 2016;Statish & Tedj ,2004Tan, et al,2002;Ab Hamid& Kassim, 2004;Bull, 2003;
Financial	Increasing Profitability ٬ Reducing Operating Costs ٬ Receivables Period ; Earnings per share; Rate of Return on Investment; Market value per share; Increasing sales from current customers; Increasing Online Sales Share; Flexibility in Financing; Cash Flow Period; Increasing the value of the customer life cycle; Return on capital; Increasing annual sales; Increasing sales from new customers	Kabir& Akhtar ,2011;Brown and Jayakody,2008;Choshin& Ghaffari, 2017;Delone& Mclean, 2004;Hidayanto et al,2017;Molla& Licker, 2001;Tam et al,2019;Chiu& Cho, 2019;Hua et ak,2019;Kremez et ak,2019Eduardsen, 2018;Faraoni et al,2019;Alzahrani,2019;Tamet al,2019;Li& Xie,2012;Andonova, 2003;Li, & Xie, 2012,Sharma& Lijuan, 2015;Hua, 2016;Statish & Tedj ,2004Tan, et al,2002;Ab Hamid& Kassim, 2004;Bull, 2003;Hamill& Stevenson, 2002;Hande & Hülya ,2009;Hassan & Tibbits, 2000;Jarrahi,2005;Kaplan& Norton,,2001;

Therefore, based on such a scale, each decision -maker will provide a set of n values for the evaluation criteria and indicators. These values indicate the degree of importance of the criteria and/or the degree of criteria met by decision options. The fuzzy screening process is a two-step process:

(A) Information and knowledge of decision-makers:

At this point, the team members express their preferential and judgmental information about the importance of each criterion or the degree to which each criterion is met through decision options in the form of lingual words defined in Table 1, which is based on a linear sequential scale.

(B) Integrating and aggregating the lingual judgment of the decision- makers: At this

stage, the judgments and fuzzy preferences of each decision- maker on the degree of importance of each criterion or the degree to which each criterion is met through decision options are integrated and aggregated to obtain a single value for each factor. The first step in this point is to define an aggregation function (Q) for the decision- making body. This function is the agreement of a certain number of members of the decision-making team on the degree of im-portance of each criterion or the degree to which each criterion is met by the choice options and screening that factor as the most appropriate one. Accordingly, each factor i provides Value decision making body Q(k). Q(k) represents that if k-th member considers the factor i as a key factor and selects it as the most appropriate option, then how that factor will be chosen: (Yager, 1993)

Table 2: The qualitative-lingual space for evaluating criteria and determining their degrees of importance

Lingual words	Defined symbol	Lingual value	Lingual words	Defined symbol	Lingul value	Lingual words	Defined symbol	Lingual value
definitely important	S_7	OU	Relatively trivial	S_4	M	Very trivial	S_2	VL
Very important	S_6	VH	Trivlal	S_3	L	untrivial	S_1	N
important	S_5	H						

A Comment aggregation function of the decision-making team members (Q) must be as follows:

A: If the greater number of experts agree, the degree of persuasion of the decision maker will be greater:

$$Q(K) \geq Q(K') \quad K \geq K' \tag{3}$$

B- If all experts are satisfied, satisfaction should be at the highest possible level:

$$Q(I) = S_7 \tag{4}$$

C- If the decision-making team needs the support of all team members, then we have:

$$\begin{cases} Q(k) = S_1 & k < I \\ Q(k) = S_7 & K = I \end{cases} \tag{5}$$

D- If the support of just one member of the decision-making team is enough to make it a worthy option, then we have:

$$Q(K) = S7 \quad k = 1, 2, \dots, I \tag{6}$$

E- If the support of at least m members of the decision-making team is sufficient to consider that option, then we have:

$$\begin{cases} Q(k) = S_1 & k < m \\ Q(k) = S_7 & k \geq m \end{cases} \tag{7}$$

After selecting an appropriate consensus function, the OWA operator can now be used to integrate decision makers' opinions. OWA is a common and effective method of integrating People's lingual preferences in a lingual collective and group preference. This operator is introduced as a new sum technique by Yager. The OWA operator with n dimensions is defined as a representation $f:[0,1]^n \rightarrow [0,1]$ f related to the Weighted Vector $Wi = (w_1, w_2, w_3; \dots, w_k)'w$; As we have for $1 \leq i \leq n$:

$$wi \epsilon [0\text{-}1] \tag{8}$$

$$\sum_{i\text{-}1}^n Wi\text{-}1 \tag{9}$$

$$f(a_1, a_2; + \dots + a_n) \sum_{j=1}^n = 1$$
$$w_j b_j = w_1 w_2 + w_2 b_2 + \dots + w_n b_n \tag{10}$$

Where b_j is the largest jthe element in the sum of prepositions $a_1, a_2, \dots a_n$

By marking B as an inclusion vector, The f-prepositions are the descending sorted of $f(a_1, a_2, a_3, \dots a_n) \sum_{i=1}^n wb^T$ that the operator provides a type of aggregation that always lies be-

tween the OR and AND.

An essential aspect of this operator is the re-ranking; specifically, the sum ai is not associated with a particular weight w1, but the weight is associated with a Sorted position of the sum. Different OWA operators are distinguished by their weight function. : (Yager, 1993).

RESEARCH METHODOLOGY

This is a survey study and a questionnaire is used to gather information. Therefore, the questionnaire was run on a seven-point Likert scale with the Qualitative Scale outlined in Table 1 including the defined indices for each Balanced Card. The research questionnaire was given to 40 experts and managers of Parsian data processors group. They were asked to state the importance of each indicator as an effective indicator in evaluating the implementation of e-customer relationship management. In this study, the following criteria were used to select the experts:

1. A high level of familiarity with the Internet and its tools;

2. Familiarity with the characteristics of the service industry, especially the financial services industry;

3. Understanding the concepts of marketing, e-marketing, and especially e-customer relationship management.

In this section, the research data are analyzed using Yager's fuzzy screening technique in order to identify key indicators of the four viewpoints of the balanced scorecard of the implementation of electronic customer relationship managemen evaluationt. Therefore, it is necessary to define the consensus function first. Here the consensus function of the research team members is defined as follows.

$$b(k)=Int[1+(k(q-1)/I)]\ k=0,1,2,\ldots\ldots I\ \text{،}$$
$$Q_{c(k)=sb(k)}$$
$$(11)$$

Where q represents the number of points in the selected qualitative space (S_1, S_2, S_3, S_4, S_5, S_6, S_7), I represents the number of members of the decision-making team of the organization and Int represents the integer.

Clearly, in the above definition, whatever the values of q and I are, we have:

$$Q_c(0)=S_1\ ,\ Q_c(I)=S7 \qquad (12)$$

Given that the number of experts involved in the research is 40, based on the scale S_1, S_2, S_3, S_4, S_5, S_6, S_7 , we have:

$$b(k)=Int[1+(k\ (7-1)/14)]=int[1\div 0/43k] \quad (13)$$

They were then calculated using consensus function values and shown in Table (2).

Now the lingual values obtained from participating experts to the OWA evaluation process are sorted In descending order. Total (collective) Assessment of factor i can be calculated by using the Eq. 1.

$$u_i=\ u_i=Max\ [Q_c(k)\wedge Bk_i\ ],\ i=1,2,\ldots..n \qquad (14)$$

kB represents the kth highest score of i. k_cQ (cQ) indicates how much the decision -maker feels that at least the support of k experts is needed. $Q_c(k)\wedge Q_C]B_{ki}$ can be considered as weighing to k^{th} factor score, $(B_{ki})_i$

Table 3: Consensus FunctionValues of Participants in the Process of Evaluating Implementation of Electronic Communications Management of Parsian Data Processors Group

Q_c (K)	$Q_{c(0)}$	$Q_{c(1)}$	$Q_{c(2)}$	$Q_{c(3)}$	$Qc_{(4)}$	$Qc_{(5)}$	$Qc_{(6)}$	$Qc_{(7)}$
b(k)	S_1 N	S_1 N	S_2 VL	S_2 VL	S_3 L	S_3 L	S_4 M	S_4
Qc(K)	$Q_{c(8)}$	$Q_{c(9)}$	$Q_{c(10)}$	$Q_{c(11)}$	$Q_{c(12)}$	$Q_{c(13)}$	$Q_{c(!4)}$	
B(k)	S_4 M	S_5 H	S_5 H	S_6 VH	S_6 VH	S_7 OU	S_7 OU	

According to the wish of the decision maker (one who recognizes the need for the support of k esperts), Qc k was considered. Max operator plays the sum role in ordinary numerical averaging. The output of Equation 15 represents the significance of each indicators of the balanced card viewpoint, as shown in Table 3, 4,5,6,7. Finally, based on the threshold level set by the decision-maker or the meeting moderator, (those indicators are selected whose score is equivalent to very important and infinitely important), about acceptance of the indicators of each viewpoint as a key and important indicator in the process of evaluating the implementation of e-customer relationship management with the Parsian Data Processor Group will be decided. The results of Table (3) show that among the sub-indicators of Balanced Scorecard Transactions (processes) of e-Customer Relationship Management Evaluation, Only the indicators of increasing software updates used, increasing and improving the use of technology, increasing diversity of services offered on the site (email) and increasing the use of advanced technologies compared to competitors are selected to be included in the process of evaluating and controlling the electronic customer relationship management. Also, the results of the screening process (Table 4) show that increasing the profitability, increasing the share of online sales, flexibility in financing, and increasing the annual sales of the financial indicators are selected as key indicators.

The Fuzzy screening results of sub-indicators of customer viewpoint in table 5 show that indicators of increasing trust and credibility of brand-company in the online environment, increasing customer support during the buying process and afterward, increasing service utilization rates and various capabilities of the site and increasing customers' satisfaction are selected as key indicators. As shown in Table 6, sub-indicators of continuous improvement and modernization of the company's current services, ability to use new technologies, knowledge management capabilities in the organization, and the ability of the company to learn from the markets and react to it are chosen as key indicators of the learning and innovation viewpoint to be included in balanced Scorecard of Customer Relationship Management Evaluation process.

Table 4: Lingual scoring of sub-indicators of the exchange viewpoint (processes) and the result of fuzzy screening

Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)	Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)
Increasing the software updates used	Very important	*	Increasing and improving the use of technology	Very important	*
Increasing the quality of assistance and services	Important		Increasing the variety of services offered on the site (email)	Important	*
Increased use of advanced technologies compared to competitors;	Relatively Important	*	Support offered on the site, essential phones, quick answer system	Important	
Implenting much faster and more efficient business processes in the company;	Important		Increasing the capability of business processes used in the company;	important	
Improving site content management	Important				

Table 5: Lingual score of sub-indicators of financial viewpoint and fuzzy screening outcome

Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)	Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)
Increasing profitability capability	Very Important	*	Flexibility in financing	Very important	*
Reducing operating costs	Important		cash flow period	Very important	*
Receiving claims period	Relatively important		Increasing customer lifetime value	Important	important
Earnings per share	Relatively Important		Return of capital period	Important	important
Investment Return Rate	important			Important	important
Market value per share	important		Increasing annual sales	Very important	*
Increasing sales from current customers			Increasing sales from new customers		

Table 6: Lingual score of sub-indicators of customer viewpoint and fuzzy screening result

Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)	Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)
Increasing awareness of brand-corporate online presence	Relatively important		Increasing trust and credibility of brand - company in the online environment	Very important	*
Enhancing perceptions of the company as a processor benefiting from advanced technologies	Important		Enhancing customer service after sales	Very important	*
Increasing customer support during and after the purchase process	Very important	*	Increasing the repurchase rate or reuse of company services	Relatively important	
Reducing the cost of attracting new customers	Relatively important		Improving customer database	Important	
Improving in the accurate determination of target markets	Relatively important		Increasing customer satisfaction	Very important	*
Increasing the frequency of customer exchanges	Relatively important		Increasing the rate of use of various services and features of the site;	Very important	*
Increasing customer complaints handling rates	Very important	*	Increasing the use rate of support services on the site	important	

Table 7: Lingual score of learning and innovation sub-indicators and fuzzy screening result

Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)	Sub-criteria from the viewpoint of exchanges (process)	Score of importance degree	Acceptance (*)
	Very important	*		Relatively important	
Continuous improvement and modernization of the company's current services	Very Important	*	Increasing the rate of development of new services		
Ability to use new technologies	Very Important	*	The ability to participate in learning from the market and reacting to it	Very important	*
Knowledge management capability in the organization	Very Important	*	Flexibility versus competitors strategy	Relatively important	

CONCLUSION

A successful e-customer relationship management program has significant tangible outputs including improvements in financial performance (such as cost reduction or sales and profitability) and intangible metrics such as customer value, brand image, business process excellence and Service and innovation. Therefore, evaluating the success of using this system in companies is of particular importance. This study has used Balanced Scorecard and Fuzzy Logic to evaluate the success of e-customer relationship management using performance management tools. On the one hand, one of the reasons for choosing BSC method in this study is its ability to identify, combine and evaluate tangible and intangible indicators in relation to the long-term strategy of the company; on the other hand, The purpose of e-customer relationship management is to make financial and non-financial improvements in the electronic trading environment; so the overall and integrated nature of the BSC can be useful in evaluating the success of e-customer relationship management. Previous studies have also confirmed the suitability of BSC as a tool for measuring the performance of e-customer relationship management. According to the BSC multi-dimensional approach, 33 criteria were identified to evaluate the success of e-customer relationship management performance and were categorized into 4 main dimensions (viewpoints) including customer, internal exchanges, innovation and learning and finance. The Balanced ScoreCard Technique was combined with the Yager's Screening Technique to identify key indicators and effective performance appraisal processes. The results showed that the five indicators of customer viewpoint including increasing customer support during Purchasing Process and Afterward, Increasing Brand Confidence and Credibility , Participating in the Online Environment, Enhancing Customer Service After Sales, Increasing Customer Satisfaction, Increasing Site Usage and Various Site Capabilities, the four indicators of learning and innovating viewpoint including continuous improvement and modernization of the company's current services, the ability to use the new technologies, knowledge management capabilities in the organization and the ability of the company to learn from the market and to react it, the four indicators of financial viewpoint including Increased profitability; Increased share of online sales, flexibility in financing and increased annual sales , and the four indicators of exchange (processes) viewpoint including increased software update, increased use of advanced technologies compared to competitors; increased and improved use of Technology and Increasing Diversity of Services Offered on the Site (E-mail) have extracted as Key Indicators of Balanced Card Relationship Management Evaluation. According to the results of the research, the following suggestions are recommended to the companies covered by Parsian Data Processor Group.

1- Developing standards related to the design,

establishment, development, maintenance and operation of software and hardware networks, and information technology in subsidiaries and supervising their proper implementation;

2. Managing, developing and securing financial resources and making optimal use of these resources through the financial flow between the company and its subsidiaries;

3. Attracting domestic and foreign capital to develop and advance the activities of the company and its subsidiaries;

4- Investigating, reviewing and other necessary activities for the development of technology, transfer of technical knowledge and information in the fields of software, hardware and information technology in the field of corporate duties

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