Investigation on Common Features of ERP and CRM-For Separate Implementations

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ABSTRACT

In today’s competitive world, Enterprise resource planning systems and Customer relation management systems are among the fundamental requirements in all organizations and some of them prefer to use these systems separately but parallel. Enterprise resource planning (ERP) systems are highly complex information systems widely used by companies in the recent years. Applying the system of customer relationship management (CRM), a constructive relationship can be developed between the customers and the organizations. Therefore, the establishment of an efficient customer relationship management system seems to be another absolute necessity for organizations.

Most analysts in information system field consider enterprise resource planning (ERP) and customer relationship management (CRM) systems to be like two sides of the same coin working in concert to increase the profitability of the organization. Reviewing the research literature, the present study aims to recognize the common aspects affecting these systems. It makes the organizations find and maintain their status and is an attempt to encourage them in parallel pursuit of the common dimensions and features.

KEYWORDS: Information systems, Enterprise Resource Planning (ERP), Customer Relation Management (CRM), Organization
1. Introduction

The industrial revolution dramatically changed the world in almost every aspect. Trade and business in human communities were no exception as well and underwent various transformations. Keeping up in a competitive market required the employment of various techniques and strategies by the organization managers. The traditional unsophisticated form of marketing transformed into a highly professional demanding activity requiring extensive knowledge in areas including social, political, cultural, economic and information technology.

The spread of information technology and its application in organizations, particularly in manufacturing industry was extraordinarily rapid in the 1970s. Development of information systems resulted in creation of material requirements planning (MRP) systems. Then enterprise resource planning (EPR) systems were designed to settle the problem of lack of system integration and take advantage of integrated management components. Among the various software systems in IT industry, ERP is a so-called super-structure encompassing different parts of business affairs including goods and purchase process planning, production planning, raw materials and customer services. Therefore, the ERP program architectures are in a harmonious relationship with three other significant business areas; customer relationship management, supply chain management and supplier relationship management.

Taking the importance of customer relationship management into consideration, it is thought that the systems of enterprise resource planning and customer relationship management are two sides of the same coin both of which are affected by organizational variables. Thus, the final section of the present study is devoted to assessment of factors affecting the success of these systems as well as their potential synergies on one another.

2. Theoretical foundations of the research

1.2 The system of customer relationship management

The concept of customer relationship management as a novel expression was introduced in the mid-1990s. Although CRM is one of the core electronic commerce concepts, no common definition has been developed yet. Some analysts and experts have defined this recent concept as it follows;

Kudal in 1998 defines CRM as a combination of customer- based processes and technologies. Kalakota and Robinson in 2001 describe this concept as the integrity of sales, marketing and service strategies which can avoid the adoption of a one-dimensional viewpoint toward...
customers. In their given definition, they have also mentioned the role process and department integrity in the implementation of CRM system (Ngai, 2005).

Kotler and Armstrong in 2004 define CRM as the process of establishing and maintaining relationships with profitable customers through offering superior value to the customers and gain their satisfactions. In this regard, customers’ needs and demands are considered to be the major focus of any organizational decision making process (Kotler and Armstrong, 2004). CRM is all about taking the customers into consideration. The purpose of setting up a customer-based system is increasing the customer and organizations mutual values (Payne and Frow, 2004). Improving of customer retention rate, increasing revenue and profitability, controlling costs and acquiring a higher efficiency level are what the organizations mean by this value. Adopting this system, customers’ demands are recognized even before being expressed and this advantage can make organizations capable of earning stronger loyalty form customers and reducing service and operation costs.

Despite the fact that CRM is a newborn concept, its principles have been existed for fat too long. Since so many organizations have been organized based on the products or the communication channels offered to the customers, marketers have been always attempting to establish a close relationship between the customers and the organizations. Customer profitability has been taken into consideration for several years as well. Due to the advances made by communication and information technology, person-to-person communication, customer value analysis and production and mass customization are no longer beyond the bounds of possibility. CRM is a commercial strategy in which it is believed that the more the customers’ desires are fulfilled, the more loyal they would be. Some analysts consider it as a management approach which involves the stages of identifying, attracting, developing and maintaining permanent profitable relationships with the customers. The research results indicate that 5 % increase in customer retention can increase profits anywhere from 5% to 95% (Greenberg, 2002).

Customer relationship management uses the technology as a lever to coordinate the organizational interactions with the purpose of earning long-term loyalties. Technological advances over the past decade have transformed business into a process of communication with customers. Customer relationship management is an efficiency strategy which benefits from the power of technology to integrate all the organizational dimensions (Lovlock and Wright, 1998).
2.2. Enterprise resource planning system

Enterprise resource planning systems are considered to be the latest achievements in the field of information technology. Companies interested in information systems have been greatly attracted to this version of information systems. During the process of information system designing which had initiated several years ago, ERP, a combination of all previous information systems aiming to meet the needs of all organization units within a single system, emerged in the course of information systems evolution. Leading suppliers of ERP software such as SAP, Oracle, People Soft and QAD had experience an exponential growth during the 1990s. Besides the effects of globalization and competition growth, this rapid development can be attributed to the companies need for integrated systems within various fields and also to the exorbitant maintenance costs they had to bear.

In the final years of the 20th century, ERP suppliers could grow up to 60 percent. At the beginning of the 21st century they sought to provide their systems with the application of e-commerce. The purpose of such measure was providing users’ with the access to the database of the EPR system simply through using an internet explorer anywhere and anytime. By deployment of the above mentioned systems most of the organizations are likely to encounter fresh challenges. A great deal of evidence suggests that many of these system implementation projects have not terminated within the time and budget limits. It should be noted that the successful implementation of ERP systems is a slow and laborious process. In fact these projects prove fairly risky and recommended to the organizations not unless they have found adequate justification for deploying these systems and have been prepared enough for the process ahead(Forbs, May 2013).

Considering the complexities of information systems, the present study reviews the research literature and extracts useful information regarding the success of these information systems, with the purpose of assessing the factors influencing the efficiency and productivity of system with the utmost use of all facilities.

3- Literature

Particular attention has been devoted to the approach of customer relationship management due to the high importance of understanding this system and its tangible effects on increasing the levels of customers’ satisfaction as well as the corporates profitability. This attention is directed to the matter in the forms of several internal and external researches as it follows:
Foss and Stone emphasize on effective role of CRM system over costumer data management in financial services companies throughout the world. Using already achieved data, this companies began creating customer centers, while collection of data is taking place with aid of a consultant company in order to collect necessary data, and to set procedures and tools. Using CRM system, they could classify, categorize and set their customer data (Foss and Stone, 2002).

Newell and godin dedicated their study to the role of basing CRM system in order to achieve, decrease in costs and increase in sales. In order to gain long-term profits, Companies should efforts to convert the company to a costumer-based corporation. So, They can be success in running CRM in its operations, then the companies can design their products in a custom workshop and having closer relationship with its marketing sale units than before (Newell and godin, 2003).

Peelen and others devoted her studies on basing CRM in order to improve customer service and gain an increase in customer satisfaction in Canadian Post. This company, in order to alter its customer support, successfully tried to gain information from all Canadian postal companies. With this objective at hand, the company not only did gain success, but also managed to establish platforms and procedures to have a stable framework in the future. This altering success has made Canadian Post a leader in worldwide margin (Peelen, Beltman and etc 2006).

Many researchers also tried to clarify factors for organizational success with different titles. Many of which published articles with titles of drastic factors for success in ERP systems. In these studies, researchers usually tried to comprehend these factors by reviewing the literature of respective studies.

Bernroider and Koch (2001) identify success factors of ERP in large and medium organizations as listed below. In their study, 12 key factors (operation system dependency, operation improvement, sellers’ market, customer and supplier’s demands, worldwide integrity of software, organizational flexibility, customer satisfaction, controller organization guidelines, integrity and flexibility of the software, added creativity capacity, short operation duration and adequate support (Bernroider and Koch, 2001).

Gattiker (2007) reviewed 22 literature parts of studies over ERP success factors and their effect on the life cycle of projects in organizations. Some of these factors including senior executive support and strong inter-organization connections have a determinant effect on project’s life cycle. By examining comments of experts from different countries, it is evident that determinant and key factors may vary from nation to nation (Gattiker, 2009).

Arnoldia considers the following factors of success for ERP from review of literatures, and then presented the results to ERP experts of Lithuania: Senior executive support, suitable project
management, introduction of organization and beneficiaries' demands, effective organized training of the staff, development of processes, organizational alterations management and defining exact objectives of the project. Lithuanian experts specifically categorized and then identified the key factors for the country of Lithuania (Arnoldia, 2010).

4. Research method

In this study, since effective and mutual relationships within communication management and resource planning are regarded, we could consider correlation to be our research method. On the other hand, this study is dedicated to develop a practical field of science; therefore, it could be considered as an applied research. In addition, based on type of data, descriptive research is also applicable.

Following review of literature and effective success factors for ERP, the following factors are identified:

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<th>Cultural factors</th>
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<td>Organizational teamwork</td>
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<td>Capability of change</td>
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<td>Staff cooperation</td>
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<td>Active project pioneers</td>
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<td>Organization capabilities</td>
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<td>Suitable budget planning</td>
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<td>Capability of using consultation</td>
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<td>Planning for dealing with possible errors</td>
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<td>Suitable training programs</td>
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<td>Support factors</td>
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<td>Organization management support</td>
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<td>Freewill of decision-making for the staff</td>
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<td>Change management</td>
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<td>Motivational factors</td>
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<td>Market competitiveness</td>
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<td>General knowledge of ERP</td>
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<td>IT infrastructures</td>
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<td>Availability of IT engineers</td>
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<td>Availability of software and hardware infrastructures</td>
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<td>Revision and reengineering of processes</td>
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<td>Avoidance of excessive customization of ERP</td>
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Table(1): Effective factors of ERP
For easy evaluation and classification of CRM-Related data using the literature, following factors were extracted:


2. Value-creating Strategy: Improving performance to achieve better market share, identifying customers’ demands, constantly improving activities in order to gain benefit

3. Culture: Creating customer-orientation culture in the organization, creating organization culture adaptable to change and criticism, clean environment and design

4. Staff: Suitable rewarding system, adept staff, staff cooperation, staff satisfaction, staff training, support, integrity and care of senior management

5. Organization structure: Process teams focused on customers, integration of units beyond duty, clarifying the operation, standard presentation

6. IT: IT infrastructure, technological integrity among systems, practical (operative) applications, use of analytical tools, use of sharing tools, data management, customer support management

7. Process: Quality of products, services and organizational operations, integrity of processes, setting a goal, customer development, recovery management

8. Learning management: Active learning capability, customer training procedures, customer data sharing procedures, customers’ knowledge, revising and updating customers’ knowledge.
5. Data analysis:

While reviewing determinant factors for successful operation of ERP and CRM information systems, mutual factors were found in organizations, which affect both of them. In this study, therefore, as well as identifying these factors and presenting a conceptual model, we suggest doing parallel studies for achieving maximum efficiency; if possible, managers consider both systems simultaneously.

Five main categories are as mentioned below:

1. Organizational culture
2. IT
3. Knowledge management
4. Motivational factors
5. Support factors
Considering the research goal, spider web model is used to illustrate intended indices. Four overlaying circles and five different indices illustrate determinant factors for the aforementioned systems. In order to avoid complications, organizations should try to regard all these factors in their projects simultaneously. The more symmetry and synchronization of the circles can bring more effective the spider's web for developing for both systems.

6. Conclusion

Nowadays, every organization is obligated to use programming and comprehensive data banking systems. ERP and CRM may be among the most comprehensive and effective systems. While reviewing determinant factors for success in ERP and CRM, it was observed that they might share mutual concerns affecting them both. These factors as features, are conditions or variables that if gain suitable support and management, can affect information systems’ efficiency drastically. In this study, therefore, as well as identifying these factors and presenting a conceptual model, we suggest doing parallel studies for achieving maximum efficiency; If possible, managers consider both systems simultaneously. In this way synergy between variables may improve.
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