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Evaluation of effects of deployment automation system on integrated automation system office and financial: A case study in Municipality of Qazvin and affiliated organizations

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Abstract

Today, the era of wonderful knowledge, technology and innovation is incredible. With the rapid public access to computers and information technology and advanced media in twenty First Century, economy has no proper electronic infrastructure to handle. One of the most important factors in deciding the top and middle managers is information. Having a detailed, accurate, timely, in all subjects, and institutional department will speed up decision-making and prevent the adoption of wrong decisions. Office and financial automation is one of the most important tools to achieve effective solutions to save time, respond quickly to customers and reduce the costs of the organization through appropriate decisions. The main objective of the present study is investigation of the establishment of a comprehensive system of office and financial on the quality of managers making decision in municipality of Qazvin and affiliated organizations. The study by descriptive - survey method was conducted and 60 managers and Officers based on Morgan table and Cohen by judgmental and selective sampling were selected as samples. The instrument used in this study included interviews with a number of specialists of organizations, and provided a standard questionnaire of Office automation which examines the seven factors of accuracy, precision, speed, timely, economic performance and compares them with other similar systems. Questionnaire validity was approved by using experts and scholars ideas and its reliability by Cronbach's alpha calculation. The collected data were analyzed using a one-sample t-test and were prioritized using the Friedman test. The results of the study indicated that in general, the establishment of Office and financial comprehensive automation systems has a positive impact on the quality of management decision making.

Keywords: comprehensive automation of Office and financial, decision-making quality, Performance Improvement

Introduction

Management and decision-making are the two words are close together in organizational affairs, without doubt, the most important duty of senior managers is decision making, they can also easily be wrong in decision making. Decision-making is considered a essential function of all management duties and activities, because every manager to perform their functions which are planning, organizing, directing and monitoring, always faced with situations that require decision making and all decisions of managers for the organization has not the same importance (FEIZI, 2004) (Margrthe,1982). Decision-making forms brain and central core of planning and a program does not exist, unless decisions be taken about supplying resources for moving, and so on (Iran-NEJAD, 1996). Most managers consider decision making as individual event that occur in a given moment of time. In fact, the decision-making is process associated with the games of power, politics, personal conflicts, and organizational history and managers who have the power to detect it, make decisions better than managers who consider decisions making just as their control. Often, managers consi8der decision-making as unilateral process may which may be is most non-interest

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way of doing things. They consider decision making as a debate in which they defense of his favorite things, provide selectively information and refusing to provide conflicting data, they can provide a convincing position and stand in the face of oppositions. But there is more effective process that is process of (explorer of computer systems). During this process, people consider different options and together, they search for the best solution. However, in practice, the leader make final decision, but those who are involved in the decision making process, they should believe that their views have considered and that have had opportunity for influence on the final decision. At the time of decision-making, access to accurate, relevant and timely data is highly effective factor. Much more issues are more complex, decision making will be more difficult. The only thing that can make decision-making easier and reduce mistrust is relevant, accurate and timely information. Quality of information and efficiency of the process is manifested in its correct, relevant, timely and desirable. In any case, the quality determines how the decision making of managers and their success in managing the organization and achieving organizational goals. Manager accuracy in decision making depends on the quality and quantity of information that is available to him. Also, the information feedback of decision makes manager able to modify and enrich of information. Traditional management in the past with a physical presence in the environment, obtained information directly and experience desire methods by trial and error methods. Their intelligence network limited number of credible people who are employed in sensitive areas and sometimes influence in these information networks helps managers. Now, the old mechanisms of management information is not able respond to complex situations and can not deal with complex issues and can't be relied only on limited reports, the mind and words of those involved to deal with difficult issues. Administration in effective manner requires a processing lot of information that grows with the rapid pace and makes it difficult to analyze them. Today, storage and processing of mass data that is needed for decision-making, without the use of powerful computers today, seems impossible. (Zwass, 1992) Computers are able storage millions data in its memory and according to the written instructions, analyze mentioned data quickly in different ways, and purify them and give decision makers as usable data. No doubt, the power of computers in terms of calculation, reasoning, speed, accuracy and memory in solving organizational problems give unique situation to them. (Zethamel, 1999) Many scholars of management science believe that a manager as a decision maker in the organization and even in society should has accurate, timely information in order to makes appropriate decisions and performs them and finally evaluates them. In this case, information systems help managers to obtain information quickly and achieve maximum efficiency and effectiveness by using them efficiently. In this study, the researcher according to the title of study, "Evaluation of effects of integrated automation system of Office and financial in Qazvin Municipality and affiliated organizations, tries to convert each of them into measurable variables by a clear definition of the concepts in research and demonstrate the importance and scope of their operations. It is hoped that by using evaluations of the results obtained of the study, in addition expression of the current situation clearly, the effect of automation system on decision making quality of managers be examined properly. Municipalities of country the country are public and independent institutions which have been established to manage local affairs, including development, health of villages and cities and providing welfare for people and providing desirable environment for the citizens and people directly involved in manage these issues in the company. Municipality has Office and financial independence, legal personality and has assets, funds, income, special assignments and distinct from the state (KAMYAR, 2006), so given the need to facilitate communication and well-being of citizens and clients and improvement of correspondence and administration and bureaucracy doing and improve its efficiency and its staff, it has been established an Office and financial automation system. It can be said of almost all provincial capitals cities are equipped with financial and Office automation systems. Qazvin municipality and affiliated organizations in this regard, and given the need and importance of this issue in 2008 try to equip municipality with communication system and financial and Office automation system and today, this municipality, using this new industry tries to reach all the expected goals such as citizens' satisfaction. (Stephen, 2000)

Considering that since the year 2008 up to now, a financial and Office automation as formal in the municipality of Qazvin and affiliated organizations

have established, and given the repeated insistence of authorities for the use of this technology, some questions in the mind of the researcher were:

Whether applying this procedure has been effective in improving decision-making by senior managers and middle managers in municipality of Qazvin or not?

And, also, whether municipality of Qazvin and affiliated organizations by using available information and by relatively high cost for equipment with automation system financial and Office in order to mechanize their systems have resulted in the effectiveness and efficiency with lower costs or increasing the speed of service and using time for better quality management with better decision-making, or not?

Researcher to respond and answer this question with regard to there has not been any researches in municipality of Qazvin and affiliated organizations, tried to do this research.

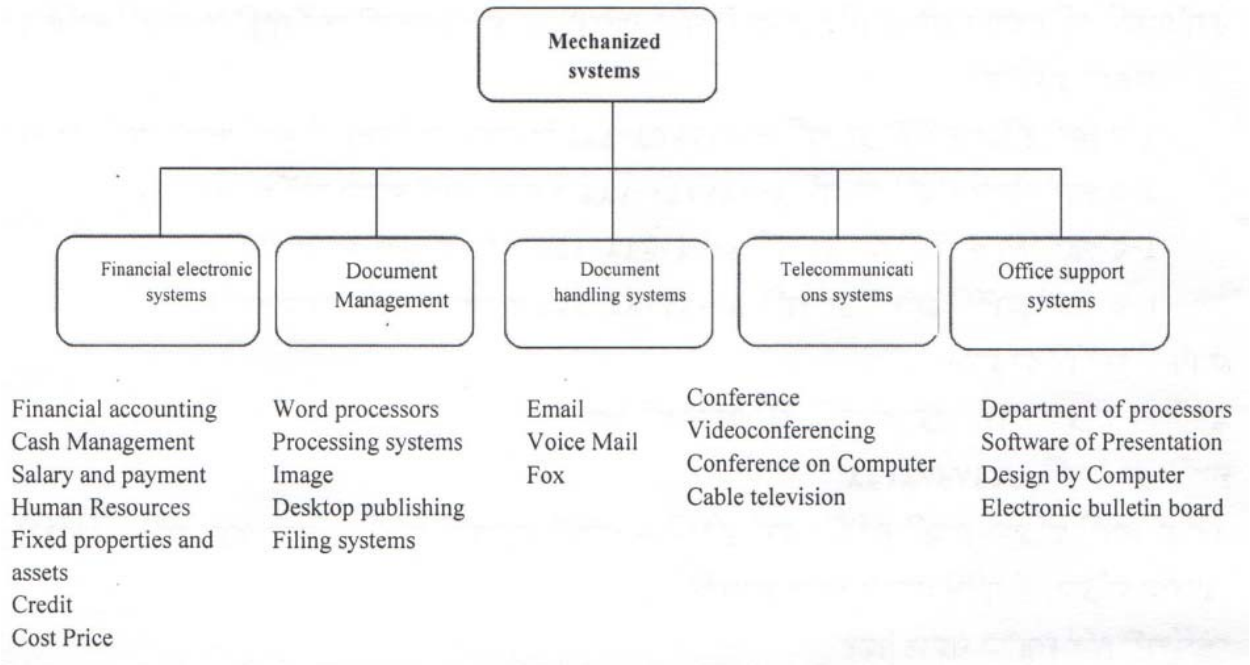

Figure 1. Main components of the office and financial mechanized systems (Sarafizadeh, 2007).

Information Systems

From a technical perspective, an information system can be defined as follows:

Some of the connected components which to assist in decision making and monitoring the organization are doing retrieval, processing, storage. Information system, in addition to providing support for decision making, coordination, monitoring, can help managers and staff in analyzing the issues, being palpable of complex issues and creation of new issues. These systems include information about people, places and things that exist within an organization and its environment (Lawn and LAVDEN, 1994). See Figure 2:

Three continuous activities in the organization provide the needed information in various fields. These activities are called the input and outcome processes. Input collects and receives the raw data from organization and its environment (Vance, 2003). Process convert these raw data into meaningful data and outcome develop them in the form of information and give people or activities that must be used them. Each system has a feedback factor as well. And the outcome is sent to specific individuals in the organization to evaluate and modify the outcome to be used (Lawn and LAVDEN, 1994). Information system to provide adequate current and future prospects should provide a Portfolio past events for Manager. Information about current activities, however, must be reported as soon as possible, the manager should be given the opportunity to act upon. Further information system should help manager for predicting confirm the decision related to future performance of the Institute. Internal and external sources are in the upper, written and oral communications are in middle and problem-solving activities are in bottom (Raymond, 1932).

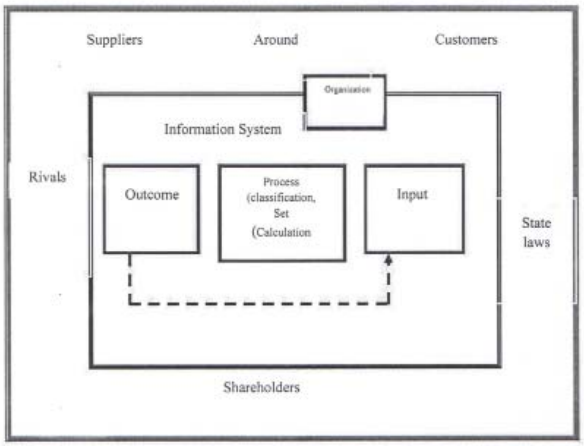

Figure 2. Communications of information and organization system.

History and definition of financial and office automation

Many believe that there is not a system and framework entitled the financial and Office automation system, but It is known as a combination of various equipments to facilitate Office matters related to financial, Office and financial automation activities. But since 1960 which more facets of applications and Office and commercial activities have been developed, existence of an integrated and suitable Office system which includes the huge volume of information, communication and correspondence, clearly felt that by various names, such as Office systems, Office information systems, end user accounting systems and end user systems, is called. In fact, financial and Office automation began in 1964, when IBM introduced its new product, means the magnetic tape and SELK screen typewriter. Typewriters that could type automatically from the text recorded on magnetic tape. These operations of automatic type soon became small microprocessors systems. (Mcleod, 1998)

The next developments was done in this field, and a real need to this development is that the efficiency of the plant in 1970, 85-90 percent was increased, In contrast, office efficiency only 4 percent was increased, So, the systems should come into existence, which increase productivity and efficiency of the offices. But, the most popular and highest degree of automation of financial and Office systems is called financial and Office automation. These systems are not definite, but limited to the views of users, and this means that the automation systems of Office and financial have countless definitions. Here we mention some of them. Automation is the use of machines to do physical works that is usually performed by humans. And Office and financial automation is included on all formal and informal electronic systems that are related to relationships of Office and financial information as electronic between people inside and outside of the organization and vice versa. The main term which distinguishes Office automation from data processing, management information systems and decision support systems is communications. Automation of the Office and financial in order to facilitate different types of communications with both oral and written sectors is as a virtual (Raymond, 1932). It may be said that office works are among works in organization that the entire staff and managers at various levels (operational, functional, intermediate, senior) are dealing with it. Among these, employees who have responsibilities, such as the publication or storage (archive) of information and are responsible for working with word processors (the conservatives), they are the Permanent Members of the Office, financial and automation systems or other communication systems (such as document and financial management systems). Automation of Office and financial includes all electronic systems which establish or facilitate different type of internal and external communications of the organization. A large volume of daily activities in organizations are office works. Automation of Office and financial has helped to increase productivity in the organization in office works and financial affairs, (MADANI and NOROUZI, 2006).

Literature review

Hasan Zadeh, (2005), in his study entitled "The comparison of performance of company of utilization of irrigation and drainage systems of the GILAN, before and after implementation", found that between the two variables, automation and performance, there is a positive relationship and automation improves the performance of the organization. The results of study of enthusiasts revealed that informatics systems in the main performance of the company, means timely schedule, repair work done quickly, and do not repeat the useful operating time of employees, are effective.

Tavakoli Zadeh, in a study evaluated the effect of training use of 1576 computer databases on the index of precision and retrieve information. And concluded that the use of databases and training in the use of these systems are effective on the accu-

racy and precision of the information and updated information and they lead to increase these factors.

Delpasand (2001), in his study entitled "the evaluation of performance of computer systems in terms of efficiency in Office of Civil Registration of the FARS province, and came to the conclusion that the computer systems are effective in increase of accuracy, speed of organization activities. But, But the use of these systems necessarily, will not lead to lower costs. In this context, the evaluation of effects of office automation system on quality is not effective.

Sadeghi (2008), during his research concluded that the establishment of automation system of decision making of managers in University of utilities of Shahid Abbaspoor has positive effects on the quality of decision-making of Senior and middle managers.

Asgari Et Al, (2010), In his study, evaluated The effect of establishing a comprehensive automation system on the quality of decision-making of managers. And they reviewed and determined the type and extent of the impact of this system on decision-making of managers in Islamic Azad University, Mazandaran province.

Therefore, after the study was conducted, they concluded that office financial and automation is effective on accuracy, timeliness, economical, easy flow of information, and track of decisions if managers.

Bryan Jolfeson and Heath (2000), evaluated the effect of information technology on productivity and growth in a sample of n = 527 in the period of 1987-1994, and the results show that in the short-term (one-year delay) computer capital return, is normal and in fact, the interests of due to the Mechanized firms is equal to the cost, with no effect on the growth productivity of labor. But in the long term (5 to 7 years), their efficiency is increased even up to 5 times, based on its findings, the benefits of information technology, will not only increase labor productivity.

Elyner and Sychel (2002) confirmed these findings and notice that the increase in labor productivity growth is higher than any other factor. This share of 13% in the period 1991-1995 to the period 1996-2001 has increased more than 42 percent.

Basanini and Eskarpta (2002) evaluated the performance of growth and productivity in OECD countries in the period 1980-2000. According to them, the countries that have experienced good growth in 1990, there are several common factors that made them successful. Improvement in the use of labor, increasing human capital and use of information technology investment are some of them. They have shown that there is a positive relationship between investment in information technology and the quest for innovation, which is shown by the increase in labor productivity.

Lee (2003) has assessed the impact of IT on the productivity of industrial activities. The results showed that IT has positive impact on productivity growth, but, like many developing countries, this effect is not significant.

Chi in 2004 in a study entitled "Analysis and design of automation systems levels" at the University of California has expressed: recently, design of automation system in order to optimize tasks and different office levels in cost savings, manpower and time, becomes more and more important. Automation facilitates Services tasks and increases productivity. Automation process requires the preparation instructions and diagrams depicting the activities of the system. Design of automation system is done based on the behavior and performance of the system and based on it, different processes occur (Chi, 2004).

Satamartyla, 2009, in his thesis entitled "home automation, a challenge for electrical designers of contractors" his main purpose was evaluation of challenges of home automation and reasons for Non-proliferation this phenomenon in Finland. He has considered the acts of working processes and business models of electrical contractors and designers and how to promote them. (Kraft, Boyce, 2002)

Methodology

To test the hypothesis, senior and middle managers of Qazvin Municipality and affiliated organizations were selected. Furthermore, by providing a conceptual model within the Theoretical framework and statement of hypotheses, results analyzed and evaluated. In the conceptual model, office and financial automation is as independent variable of automation system of office and financial. And the dependent variable is the quality of decision-making of managers that includes seven variables of the accuracy, speed, Timely, economic performance and comparison it with other similar systems in order to have an impact on the decision. (Satu, 2009)

This study in terms of the purpose is applicable and in terms of the nature is descriptive - survey. The statistical sample of study is 60 persons of the senior and middle managers of Qazvin Municipality and af-

filiated organizations. Sampling is performed by selective judgment method and sample size according to Morgan and Kuhn, has been determined 52 persons. The instrument used in this study including interviews of experts and specialists of organization and a standardized questionnaire of office automation that evaluates the quality of decision-making of managers and its dimensions, and it includes 18 questions based on a LIKERT. The validity of the questionnaire as content and after achieving opinions of experts and business professionals with the necessary amendments was approved. The CRONBACH alpha reliability was obtained, which was equal to 0.889, indicating high reliability of the questionnaire. It should be noted that for analysis of statistical data and evaluation of the research hypotheses using software SPSS, inferential statistical test with data types and variables used. Also, for the analysis of data, single-sample t-test and Bartlett's test and Friedman factor analysis, have been used.

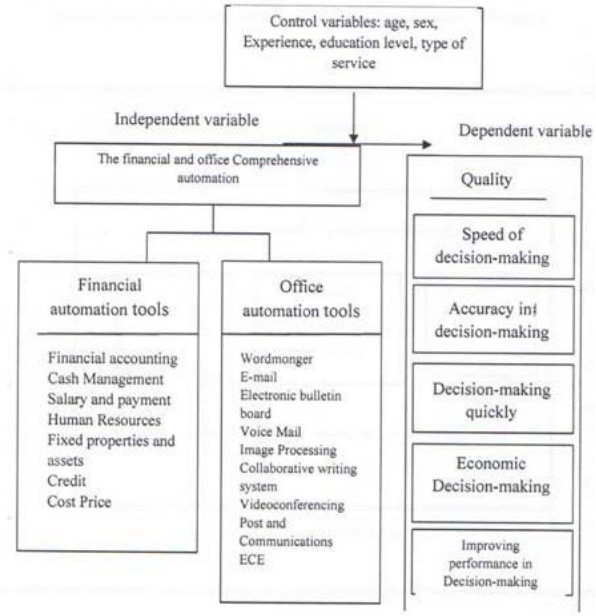

Figure 3. Conceptual model and theoretical framework of study decision-making quickly

Table 1. The Statistical Sample of managers Municipality of Qazvin municipality and affiliated organizations

In the present study					
Education	**Frequency**	**Percent**	**Type of Liability**	**Frequency**	**Percent**
Associate's degree	2	3.8	Senior Management	22,	42.3
Bachelor	36,	69.2	Heads of departments	11,	21.2
MA	14,	26.9	Middle managers	19th	36.5
Total	52,	100.0	Total	52,	100.0

Table 2. The values of normality test

Variable	Number	Mean	SD	KOLMO-GROV Smirnov	Signifi-cant level
Variable of the speed of decision making	52	7.46	1.51	0.834	0.202
Variable of the precision of decision making	52	9.59	2.06	0.986	0.285
Variable of the economic decision making	52	9.5	2.06	0.986	0.285
Variable of the Timeliness of decision making	52	10.77	1.77	1.282	0.75
Variable of the accuracy of decision making	52	7.08	1.37	1.26	0.58
Variable of improving performance and management decisions	52	17.38	3.24	0.959	0.317
Comparison RIVERZ automation with other automations	52	3.23	1.02	1.732	0.05

Results

KOLMOGROV Smirnov test is performed in order to ensure that the values are normal, that its values found in table 2.

Then, as a test, after evaluation the results of the main research hypothesis, it is found that there are a significant relationship between the establishing of office and financial automation systems and decision-making quality of managers which

including variables of speed, accuracy, timeliness, economically, and improve the performance of Qazvin Municipality and affiliated organizations and in comparison of this automation system with other established automation systems, there are no differences. In order to answer the main research hypotheses and determine the type and level of effect of establishing financial and office automation system on the quality of decision-making of managers, Factor Analysis test of BARTLETT also was used. The results are shown in Table 3.

Table 3. Bartlett test

Bartlett test	
Bartlett's test amount	0.858
The chi-square	154.341
Degrees of freedom	21,
Significant level	00:00

Conclusions

The results of the main hypothesis of the study showed that the establishing a Comprehensive Automation of Office System has effect on the Decision-Making Quality of Managers including variables accuracy, timeliness, economical, faster, improving decision-making quality of managers of Qazvin Municipality and affiliated organizations. The results of this hypothesis and the findings of this study with further researches conducted are in a way. The results also indicated a positive impact of the establishing a Comprehensive Automation of Office System on the quality of decision-making of senior, middle and executive managers. The results of the first hypothesis, as well as indicated the fact that the establishment of integrated automation system of office and financial has impact on decision-making accuracy of managers of Qazvin Municipality and organizations affiliated. And it will lead to increase accuracy of decision-making of managers. These findings are consistent with research of TAVAKOLI ZADEH, because he during his studies found that training in the use of computer databases has impact on the accuracy of data used in an organization and increase the accuracy of the information. The results of second sub-hypothesis indicated that the establishing an automation system has a positive impact on the precision of decision-making of managers and it lead to increase the precision of decision-making of managers.

These findings are consistent with the results of the DELPASAND study (2001), he believe that computer systems can increase the precision of the organization's activities. The results of third sub-hypothesis implies that the establishing an automation system has positive impact on timeliness of decision-making of managers and it will lead to enhance and improve the timeliness of decision-making of managers, this result is consistent with the results of study of ALAGHEMANDAN (2001) and BAHARI (2009) and MOSLEMI (2005).

ALAGHEMANDAN and other persons believe that the Informatics systems have positive impact on firm performance, and in particular the timeliness of schedules. This means that these systems lead to increase the timeliness and realization of plans according to the schedule.

The fourth sub-hypothesis test revealed that the establishing a comprehensive automation system of office and financial is effective in economic decision-making of managers. It will lead to increase economic decision-making of managers. Findings are inconsistent with DELPASAND results (2001), because DELPASAND in his researches reached the conclusion that the use of computer systems to reduce costs and economic decision-making of managers is not effective.

The fifth sub-hypothesis test shows that, the establishing a comprehensive automation system of office and financial is effective on convenience the flow of information in decision-making of managers. This system increases convenience and access to timely information in organization. These findings are consistent with the study of HASANZADEH (2005), because HASANZADEH in his studies noticed a positive relationship between implementation of the automation system and improve the performance of organization in decision-making of managers and employees. The Seventh sub-hypothesis test indicates that the comparison of financial and office automation systems with other automation systems showed no a lot of difference, which these finding has been studied for the first time. Overall, the findings showed that, application of office and financial automation systems improve decision-making quality of managers and its aspects. It is recommended that not only respected managers, training is provided on how to use these systems, but also for staff training courses to be held in this regard. In addition to reviewing the automation processes, optimum use of financial and office reports should be considered in order to munici-

palities be able perform their duties in management of costs and satisfaction of citizens.(Famozzi, Peterson, 2003)

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