

# Administrative Automation and Its Impact on Decision Making by the Headquarter Managers of Iran Melli Bank

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## ABSTRACT

The aim of this research is to study the automation System and its impact on Decision making. Due to wide international competition, especially in the field of economic functions, it is necessary to make a change in management methods in order to guarantee the survival of Bank Melli. Considering reviews of previous research done in this regard, four variables were selected as the predictors and four other indicators of Decision making were selected as the dependent variables. Predictor variables include Work Hours, Output Letters, Concept and Letter Numbers. The independent variables are automation System and Improve of decision making, On-Time decision making, Accurate decision making, Economic decision making act as the moderating variables. Based on previous research, hypothesis of the paper is about the correlation that exists among the independent and dependent variables. The SPSS software was used to analyze data from the research. Two methods of descriptive and inferential statistics were used for data analysis. Firstly, Descriptive Statistics was used to identify the mean and standard deviation values of the Variables. Secondly, Multivariate regressions method was applied to assess the association between the two groups of variables. Multivariate regressions method is the technique which enables the researcher to predict the improvement in Decision Making caused by the multiple variables. Sample size of this research was 60 Banks' managers working in the headquarter of Bank Melli Iran. The results of this study will show that there are significant correlation between the independent variables and Accurate Decision Making; so, predictor's variables are able to explore the variances of "Improve of Decision Making" and also predict the effect on On-Time Decision Making, Accurate Decision Making, and Economic Decision Making. According to research findings, it can be concluded that automation System contributes to decision making in Bank Melli Iran. Relying on the findings and in line with the relationship between decision making and automation system, further

research works using different methods and samples is recommended.

## KEYWORDS

Automation System, Decision Making, Multivariate regression, Melli Bank

## INTRODUCTION

Specifying any relationship among different variables is the real basis of a scientific re- search. There are some differences between both key available methods for determining relationships. One of the mentioned methods is descriptive which include a set of methods for explaining the conditions and/or considered phenomenon. Descriptive research is usually performed only for more recognition and/or facilitating decision making process (Sarmad, Morteza, Page 80: 2009).

This chapter describes the methods used to collect the data for the study. It is impossible to be ensured about the reality of obtained recognitions. This is because of unlimited research cases and our limited knowledge and methods. Now if we assume that reality is the real goal of researching activities and researchers are seeking for it as well, then all their efforts are geared towards reality (Rafie Pour, p.80:2004). It is impossible to find research goals, except when there is a correct methodology. "Descartes considers method as a real way for finding the scientific realities." (Khaki, pp. 193-194: 2003). The real base of a scientific research is to determine if any relations exist among the variables. There are some differences between the two major methods for specifying their relations.

One of the mentioned methods is explanatory which includes a collection of methods for explaining the considered conditions and/or phenomenon. Any exact performance of explanatory research is just for additional knowledge about current conditions and/or facilitation of decision making process (Sarmad, Morteza, P. 80: 2009). The present research intends to find the effects of automation system on three different variables including:

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Correct decision making of manager, On-time decision making of managers, and Economic condition for making any decisions by managers. Automation system is the independent variable of this research.

### RESEARCH METHOD

There are various methods in making a research. Usually researchers do not have a common idea about various research methods. Then there are various classifications, accordingly. It is necessary to mention that this research is applicable with a comparative – causal method for data collection. Data collection is on field basis. From the viewpoint of goal we may classify research methods into historical, explanatory and experimental ones.

In addition, there are three general groups for the nature and method of any researches including: Fundamental, theoretical and applicable. Explanatory methods mean real & regular study of properties of a situation or a subject. Researcher intends to find out any ideas, thoughts, conceptions and preferences of people through this method. In other words, researcher tries to report “What is” without any interfere of mental reasoning. Then it may consider real results. The real purpose of this method is to provide more explanation, registration, analysis and interpretation of current condition (Naderi & Naraq, p. 47: 2010: narrated from a thesis that belongs to Mr. Ebrahimi). Since the general goal of this research is decision making p

rocess of managers (at Iran Melli Bank), researcher considered explanatory-analytic method after occurrence as well. Any explanatory research are classified into library, observatory and measuring forms for any data collection. Measuring method was used for data collection in this research; therefore it would be included in the group of field researches. Current conditions and relations are determined in this type of research with further considerations based on this method in real organizations and by real persons. There is no more manipulation of variables.

They would be evaluated in natural form. This is one of the priorities of explanatory research method at organizational studies. Uni -Causality is the most important and new tendencies for better recognition of phenomenon which is a rejection of various schools in itself. Since all phenomena have various factors, it is necessary to consider all of them. We should observe and measure their shares in groups or change the causes and their mutual relationship. This is the introduction of multi-variables researches that may finally speak about required causal models without any exceptions in social research (Sarookhani, 2nd Edition, p. 447: 2006).

### THEORETICAL FRAMEWORK

The above framework basically highlights Automation system that is present in all above- mentioned theories with various specifications like In/out letters, Using hours and concept as an independent variables and better decision making of managers with some specifications like correctness, updating, and economy as dependent

variables. In this framework, the independent and dependent variables are as below:

- Independent Variable Automation system
- Dependent Variable Better decision making of managers
- Moderating variable Correctness Updating Economy

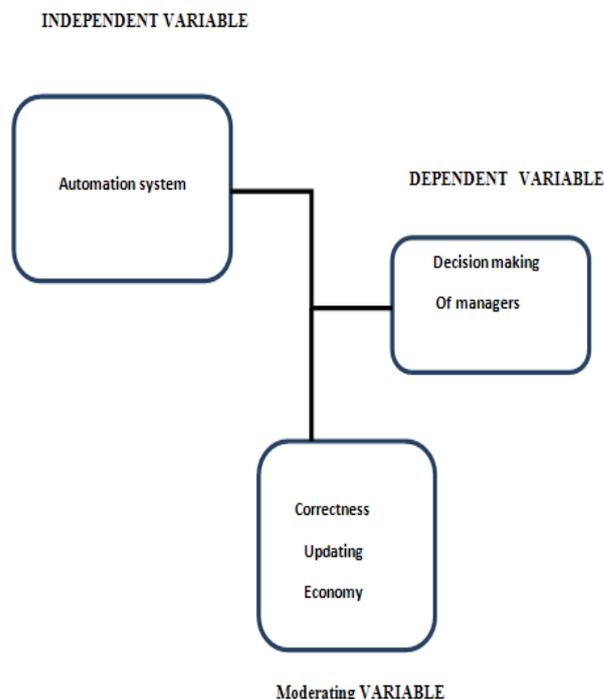


Fig.1. Theoretical framework

### HYPOTHESES DEVELOPMENT AND RESEARCH

Based on the problem statement, research questions, literature review, and theoretical framework discussed in the preceding sections, the research hypotheses development for the present study are being proposed in this section. Automation system is present in all above-mentioned theories with various specifications like In/out letters, Using hours and concept as an independent variables and better decision making of managers with some specifications like correctness, updating, and economy as dependent variables.

The hypothesis statements are as below:

H 1-Automation system with a good management support in an organization's structure will increase the effectiveness of automation system decision making of managers.

H 2-Automation system has a positive effect on increasing the correctness rate of managers' decision making.

H 3-Automation has a positive effect on updating the condition of decision making of managers.

H 4-Automation system has a positive effect on economic condition of decision making of managers. According to Saunders et al. (2009), it is also important to have a clear research strategy. The choice of strategy depends once again on the research question and objectives, but also on the existing knowledge and the amount of time you have available for the study. This research is an example of a survey strategy in which questionnaire is replicated. The research instruments are structured questionnaire and

Interviews. In present research about 60 persons of managers at Bank Melli are benefiting from office automation. Then, by filling up the questionnaires it was possible for researcher to make an evaluation of the office automation system on specified variables. Scope of research: Regarding the effect of office automation on the betterment of decision making by managers; therefore the scope of this research includes information systems.

**Sample & Sampling.** The sample of present research has a non-probable and optional form. The basic goal of this research is to evaluate any effects of automation system on a group of other variables. Therefore, it is necessary to accept only those managers who are excellent members with such a system. In case of any obstacles in selecting probable sample due to the presence of practical problems, it is possible to select a sample in another way. Perhaps it is possible to select a sub-group as the agent of total population. Then the observations are limited to the concerned sub-group with further conclusions of data to total population (Miller, pp. 209-210, 2001).

Sample of present research is non-probable & selective one. The fundamental intend of this research is to evaluate any effects of installing any automation system on other variables. Therefore, it is necessary to accept only those organizational managers as the sample members who may benefit from the mentioned system. After research problem and the type of research were determined it is necessary to select the technique of data collection for the research. There are two sources of data, secondary and primary data. Both sources have been used in this study.

The secondary data are from books, journals and Internet. In primary data collection, we collected the data using methods such as interviews and questionnaires from managers at headquarters of Bank Melli of Iran. We used structured questionnaires and structured interviews in quantitative methods. As one of the most common tools of data collection in measuring research, questionnaire means a set of goal-centered items by benefiting from various criterions which may measure the viewpoint of a respondent as well. Four below-mentioned factors should be accounted for in preparing any questionnaire:

1. Selection the subject of questions
2. Content of question
3. Phrasing of questions
4. Selection the type of questions (Sarookhani , p 24:2009)

We administered the questionnaire personally and collected it after they completed it. They were asked to answer the questionnaire and return immediately. This method is good because you can clarify any doubts. All questionnaires have cover letter explaining the purpose of the study and assuring the respondents that their anonymity will be maintained and all their information will be treated as confidential.

#### PILOT STUDY

It means ensuring about research tools and evaluation of its correctness. All questionnaires were distributed among

60 managers on trial basis. Then after removing any problems, the final format is designed in a more careful framework and in compliance to a logic idea and further evaluations. These respondents did not take part in the final survey. Its purpose was to determine the reliability and validity of the questionnaire as well as the clarity of the statements in the questionnaire. Through this pilot survey, the appropriateness of the instrument such as the use of correct words and sentences were determined. The Cronbach alpha method was used to determine the reliability of the questionnaire.

Grading procedure started from 1 up to 5 for the evaluation of any effects of office automation independent variable on dependent ones. We used Likert scope as the most efficient design for the evaluation of any attitudes among other famous models like Likert, Osgood, Bogardous, Tristan and Gatnem. The real purpose of this measuring scope was describing a subject based on society values and applying this scope for further evaluation of tendencies about social/political and economic problems. There are at least 15 up to 30 options or more in this scope. When writing the options, it is necessary to prevent from indifference, irrelevance and wage options.

Therefore, the number of options with disagreement/agreement tendencies should be equal. We will use a five point likert scale: 5= strongly agree, 4= agree, 3=neutral, 2=disagree, 1=strongly disagree. It is possible to change the options according to the ideas and research method. In order to write down the options, it is necessary to omit any indifference and irrelevance and wage options in order to distribute them directly after primary researches. Then, upon writing the primary questionnaire, it is better to prepare 30 samples for further quantitative (Validity) and qualitative (Reliability) evaluation for the omission of wage options. Generally Likert scope has great advantages. This is because it does not need a great number of options or benefit from any justice and the obtained results from more credits. Therefore, such a scope has a lot of applications for most field researchers in social sciences and specially sociology as well. It is possible to measure the same thing in various situations.

#### DATA ANALYSIS TECHNIQUES

The last part of the section on research methodology is Data Analysis. This chapter shows the generalities of research method in this paper. Data collection tool was questionnaire with validity evaluation through descriptive method and by the use of correlation coefficient function of parallel halves by Spearman Brown test and by the use of SPSS software. Furthermore, the reliability of questionnaire was confirmed by supervisor and guidance professor and benefiting ideas of specialists. Statistical population of this research includes 60 managers who are benefiting from office automation system at Bank Melli Headquarters. From the returned questionnaires, about 60 questionnaires were applicable for statistical analysis. Data analysis was carried out using the SPSS software. Inferential statistics in the form of multiple regressions and Pearson product moment

correlation was used to determine the relationship between automation and decision making of managers. Descriptive and summary statistics is used to describe the profile of the respondents (age, gender, educational qualification, job experience. etc.). Inferential statistics in the form of multiple regression is used to determine the relationship between the factors (independent variables) and decision making of managers as well as to determine the significant predictors of decision making. The level of significance is set at  $p = 0.05$ . We carried out correlation research design (hypothetic-deductive research). Where we had independent variables and dependent variable. If the relationship between the independent variable and dependent variable is statistically significant ( $p < 0.05$ ) then we do not reject the hypothesis. If not significant we reject the hypothesis. We did Pearson product moment correlation to see if they are statistically significant. If we want to find out whether correctness, updating and economic condition of decision making is the best predictor of making decision of managers.

We operationalise each of these variables with a few statements to measure them. We used 5 point likert scale to measure each of the statements. We summate the scores for the statements in each variable. We did multiple regressions to determine the contribution of each of the 3 variables to making decision of managers. We asked questions where the respondents have to answer based on a five point likert scale. Then totalled all their response to get a summated score (interval scale). We measured both variables (with statements using 5 point liker scale and sum- mate it to get interval score to see if there is relationship between automation and decision making .

We did Pearson product moment correlation to see if they are statistically significant. In social science research we use ordinal scales to get the answers of the respondents to measure their response to each of the statements used to measure the variables. We used a five point liker scale. 5= strongly agree, 4=Agree, 3= neutral, 2=disagree, 1 = strongly disagree .All social studies research use interval scores (summated ordinal scores) to measure behavioral variables. We measured both independent and dependent variables using interval. Then we used Pearson r correlation and multi-variable regression analysis to test the relationship. In parametric statistics the measurement from every respondent is included in the calculation.

#### BACKGROUND OF THE STUDY

Managers' Decision making process is always one of the major discussions in any organizations. There are considerable changes in this field upon the arising of IT and communications. This paper is based on a research to find out if there are any effects of administrative automation systems on various fields of decision making at the Iran Melli Bank. Business environments are faced with various challenges including a wide scope of internal/external transactions with relevant necessity for more contacts among organizational units and necessary supervision on work progress. Managers are required to per- form their supervising affairs with more speed and care. Large daily

transactions of organizations and great volume of data exchange are dealt with within compressed working periods. Therefore, any handy or traditional forms of performance are out of human control and may cause more problems. Due to relevant progress in IT and its related branches in recent years, there are various solutions for the business environments. Meanwhile, IT is the most important and efficient solution for facilitating, controlling and supervising data circulation in organizations. Information systems mean various software programs to facilitate the collection, reservation, recalling and controlling of information by the use of computers and databases. It is a branch of information systems under the title of Managerial Information Systems which would enable all managers and personnel to control any circulation of information at various levels in organizations. Office Automation System is one of the most efficient information systems used for assisting managers in controlling information circulation in the organizations. Generally, we have administrative negotiations in this system as well. However, it usually has various communicative tools like sending/receiving letters and instructions, sending/ receiving personal and quick messages, sending and receiving emails and so on.

Office automation includes all electronic systems available for making various types of domestic/ foreign communications. Office affairs include a great volume of daily organizational issues. It is possible to say that office affairs include various duties in which all personnel and different levels of managers (executive, operational, average and master) are involved. Among the mentioned items, those personnel who are responsible for various affairs, including publication or reserving of information and working with word processors, are called the major and permanent persons of Office automation systems and other communicative ones (including management systems of documentation).

Office automation provides a considerable increase in organizational output of office affairs. Office affairs have been ignored by organizations in the past. In spite of receiving a great share of force and energy, there was never any fundamental evaluation in order to make better and increase the output. At the end of 1980 and according to the results of a 10-years evaluation on outputs of organizations in different dimensions, it was revealed that there was just a 4% increase in the output of office affairs in spite of the 90% growth in the industry. Meanwhile, there was an increase in office affairs' costs from 20-30% up to 30-40% out of the total costs of an organization. According to the results of this research and similar ones, although there is a daily- increase in the output rate of different organizational fields, there is lack of attention on the output of office affairs' field. This was the start of more attentions being focused on submitting facilitating information system for office affairs and daily communications.

Although office automation is usually used for conducting daily communications like transfer of letters and/or messages, there are some real applications than the usual ones. It is of course related to relevant type of system planning and further facilities available in a considered

system. Information is one of the important factors in any decision making process of managers. Any exact, correct and update information will cause an increase in decision making speed and prevents incorrect decisions. Recently there is a great wave of organizations benefiting from Office Automation systems. Most organizations are interested to benefit from these systems accompanied with paying huge amounts of money to further establish and apply them. However, it is necessary to evaluate how much these information systems enable managers to make better decisions. The development of computer in recent decades is the most important change in knowledge system which began with the publishing innovation in the 15th century and/or calligraphy innovation and later.

Of course any development of new networks and media, in parallel with such an extraordinary change, is wonderful as it allows transfer of knowledge and relevant elements which are data and information. Compared to collection and processing of information, decision making affects everything that managers do at different levels of organization. When all things are changing we should also change.

There is no chance in the new decade for organizations only to apply computer systems and IT and advanced media. Future belongs to those who find exact and good knowledge about the advantages and disadvantages of these systems and benefit from others' experiences without any repetition of costs (Sarrafzadeh, 2001, p. 56). In the case of exact and relevant and updated/ quick information, we will have high speed decision making and prevention of making most incorrect decisions. In such a time schedule and with lack of required information, a professional manager is unable to manage the organization and find pre-determined goals. Micro-computer promotion in different departments was accompanied with daily- increase of distribution of new communicative products, computer and information reserve, and fundamental changes in performance method of administrative affairs. Firstly, computer systems were applied for independent communications. But little by little they become connected to each other. This may enable the end-users to not only use common files but also send some messages to each other. Today there are various types of administrative automation systems. By benefiting from modern tools of data collection/processing, Management Information System could enable managers to find their goals and assist them accordingly. Computer is able to increase speed, correctness, and sound work in an organization. Therefore, it will be effective on correctness and economic condition and updating of managers' decisions.

This paper intends to evaluate the effects of automation system on the betterment of decision making process of managers in the headquarters of Iran Melli Bank. Some of the mentioned characteristics are quick processing, Self-handling, Remote processing, Reasoning possibility, performing great volume of repeating functions, maintenance and storage of data, and reviewing them as well. Most scientists believe that making a decision depends on relevant information about it. Some even say that information includes 90% of any decisions.

As a result, a manager, as a decision maker, should be provided with suitable and careful information in order to perform his/her managerial duties with suitable decisions and evaluate this information accordingly. Decision making process is a complex cycle mixed with final power games, policies, personal differences, and organizational history. Those leaders with such a power of recognition will make better decision than those who believe and insist that

decisions are in the scope of their authority!! Therefore, it is said that some decision making processes are compared to others. Today, development and complexity of special organizations have changed the traditional management systems into a non-applicable state. Since Management Information System is a specific phenomenon different from traditional management, it is possible to consider it as the "New Effective Management".

By a physical presence in the organization, traditional managers managed to find direct information and experience the considered methods by "Trial and Error". Their information network was limited to a few confident people at different sensitive positions. In this case, Information Systems may enable the management to obtain careful information as quickly as possible and make the maximum rate of efficiency and effectiveness. Digital tools may increase our special facilities: Thinking, forming of attitudes, and cooperation with others in implementing what our thoughts.

#### RESEARCH QUESTION

Listed below are the research questions that will help the researcher to be more specific in carrying out the research. What are the success factors of automation system that should be marked for the betterment of decision making of managers in the field headquarters of Iran Melli Bank.

1. 1-To what extent does automation system help in increasing the correctness rate of managers' decision making?
2. 2-How automation system plays an important role in updating correct decision making process of managers?
3. 3-To what extent is automation system effective on the economic condition of managers' decision making?

#### RESEARCH OBJECTIVES

The real purpose of this research is to evaluate the effects of office automation system on the recovery of decision making process of Banks' managers in the field headquarters of Iran Melli Bank. Information systems (IS) in the form of knowledge management systems that can support timely management. It includes some indirect goals like recognition of integration administrative automation system for informing of personnel and managers, analysis of effects and results of office automation system on quality level, recognition of effective factors on office automation system's success and supplying suitable information like correctness, precious, update and economy, along with evaluation of any effects of office automation on the

betterment of the decision making process, and submission of suitable guidelines for automation system and more benefits.

1. To identify if automation system helps in increasing the correctness rate of decision making of managers?
2. To determine the role of automation system in updating correct decision making process of managers?
3. To identify if automation system is effective on economic condition of the decision making of managers?

This research includes a set of managers, assistants, headquarters' managers of Iran Melli Bank who may benefit from office automation system provided in their organizations. Time scope of research: This research has been made through the years 2012-2013. As a real capital, knowledge should be transferrable among human beings for greater success of organizations. Knowledge-based organizations know that it is a mental capital without any changes through time if there is an effective control for it. Then, it may preserve the organization's competitive edge and innovation as well. Benefiting from organizational mental resources will provide considerable financial advantages. Knowledge management is a process which would enable organizations to undertake better recognition, selection, organizing, publication, and transfer of important information and various skills, which are available in a non-structuralized form in the organization.

All concepts and methods are clear and transparent with the help of knowledge management. It is possible to recognize all challenges with specified benefits and considerable solutions. According to the ideas of most successful managers in the world, organizational knowledge is the most important capital of companies in the 21st century. Therefore, optimized management may cause an increase in the qualitative level of the organization. Knowledge management is a term in today's management and business literature. Those who are involved in this field completely know how much specific and different fields are hidden from the real meaning of this term.

There are available good knowledge about the key factors of knowledge management's success from other researchers in different organizations. In this thesis we try to evaluate the effects of automation system on making better decisions by managers at Iran Melli Bank. Since information plays a great role in decision making process, creating a system that could provide required information for managers, it is possible to end in the betterment of decision making process. There are three major problems in any provided information for managers:

1. Incomplete and non-enough information
2. Lack of on-time information
3. More than necessary information

In order to solve the first problem we should design our IS (information system) in a way to be able consider more internal and external factors. Regarding the second case, the important factor is quick submission of required information with a considerable importance in today's condition. This is

because even one moment of delay in making a suitable decision may lead to losing a great opportunity. Therefore, it is necessary to design a suitable decision making supporting system to provide required information at a suitable time for all managers. Currently, however, in most organizations they have the required information provided for managers. However, regarding the third case, which is providing any information more than required, is again the reason of most problems. Huge information will confuse managers and disables them to make a suitable decision at the correct time. According to all mentioned factors, any lack of Decision Support Systems (DSS) and Managers Reporting Systems (MRS) with low level of reflection would lead to having incomplete benefits from IT as well.

#### **OFFICE AUTOMATION & ORGANIZATIONAL COMMUNICATIONS**

With a glance to various applications of office automation systems, it is obvious that office automation has the highest rate of applications in this regard. It may include most communicative fields of organization. Office negotiations and communications include the highest rates of communicative fields at various organizations. All office and administrative negotiations are covered by this system in case of applying Office Automation System. Current development of office automation is also continued outside of current relations. Upon applying this system, it is not necessary any more to hold any traditional sessions or conferences. It means lack of physical gathering because there is the option for remote conferencing, removing any limitations. Due to the entrance of office automation system into organizations, we will witness great changes in the traditional and common communications as well.

It is still necessary to spend a little time for sending or receiving letters, even if it may provide new communicative facilities for personnel like sending electronic letters and personal messages. It seems that it is a nice solution for most organizational fields with further required relations. As a result, there are inevitable effects of this system on the organizational communications. The considerable point is the required human force for further supports besides the implementation of computer systems. Any presence of these systems which are active on network basis, it is necessary to have an experienced and special group at the organization to repair any probable shortages accordingly. Relevant properties of current office automation systems which are available in Iran right now are determining factors to further gain the interests of organizations to use them as much as possible.

Therefore, if any, the designing work of Office Automation Systems in Iran are focusing mostly on office and administrative negotiations with lack of attention on its other useful abilities and facilities. As a result, any evaluation of current facilities for designing systems in Iran is a suitable discussion which is proposed as the title of a separate research subject to other researchers accordingly. International changes and speed of these changes may inspire the governments to establish their

strategic landscape based on a competitive significance in international fields.

The considerable presence of Iran in various international organizations and communities and focusing on the 4th part of infra-territory documents for more public information and development of technology and research will make it possible to start using administrative automation. In order to solve any problems in any organizations, we may go through different procedures like correct recognition of problem, evaluation of different fields of problem solving, selecting the best solution and its performance, and controlling and ensuring about the correct application of the solution. It is necessary to spend a long time for solving complex organizational problems. Therefore, automation system is an effective support for the implementation of managerial duties including decision making, programming, and controlling. For this purpose, we have Administrative Automation as a modern method; on one side for accelerating the matter and also data collection and classification, and on the other it is a suitable field for performing daily affairs as well. In order to have corrected understanding of time, organizations spend a lot of time to study and recognize different solutions to problems. It is necessary to spend more time for solving complex organizational problems; therefore, Office automation system will provide a nice and effective support for performing managerial duties that include decision making, programming, and controlling for managers. Any changes in communications and office negotiations of economic organizations and institutes requires a quick process during which it is not acceptable to witness any slow and time-wasting process as before.

Therefore, it is necessary to provide different tools through which it is possible to perform office processes as quickly and carefully as possible. For this purpose, office automation system is a modern method for accelerating the work process from one side and also collecting of information about organizational activities and further classifications from the other. It is a suitable field for accelerating daily affairs as well. Automation software is part of an integrated system of management information for evaluating different models of activities in public organizations and industrial/commercial institutes.

It is also a good response to the mentioned necessities. In the relevant authority multi-squares puzzle there is no more centralized power in any organizations or controllers. Authority is distributed via world networks of wealth, information and images with a changing geometrical and geographical form and will not be removed any more. Due to daily increasing development and promotion of computer sciences, and world attitude in all fields and inevitable success of pioneers of this industry, there is a suitable field for this industry in all aspects of our country.

Then, upon the recognition of on-time necessities like office and financial automation systems, pioneer organizations could enter into the great world civilization scene accordingly. This is because any ignorance of such

great changes will cause them to be omitted due to the quick process of other great organizations. Living in an electronic culture means living in changes as a rule of survival. If managers assume to manage their company similar to the way it was done within the last ten years, they are completely wrong. They are obliged to change the current situation for more success in the next decade (Horri, 2002, p.1). The present research and its results may not only clarify all strength and weakness points of this system, and remove any probable automation system in related organizations, but may also accelerate any selection of modern organizations necessities.

#### LITERATURE REVIEW

One of the latest factors for the selection of "Office Automation" as the subject of this research was the newly published ideas of Farshad Heidari, Managing Director of Bank Melli of Iran on the bank's official site. He requested for quick development of office automation and harmonizing of software environments as the most important affairs of Information Technology (IT).

He considered these changes as the real factors in creating positive thinking and correct beliefs among managers and optimized utilization of power and energy of personnel for organizational growth. Furthermore he pointed out that any development of these systems creates a revolution in decision making system of organizations which may enable all managers (at any levels) to make on-time decisions. By pointing out the necessary enrichment of inter-organizational relations between management and personnel, he considered mutual confidence as the key factor of any increase of this relationship and focused on the necessity of obtaining ideas from colleagues and customers about the bank. Today, we are witnesses to the great changes in administrative communications at various organizations and economic institutes. It is to show that in a way, customers do not accept any slow and time wasting processes and repeated jobs. Therefore, it is necessary to provide any tools by the help of which we could perform all office processes with high speed and care and respond to customers as quickly as possible. (Heidari, 2013). For this purpose, benefiting from office automation as a modern method not only may accelerate the work projects but will also provide a suitable field for the promotion of daily affairs through data collection about various activities of the organization and classification of the same. "Management is a decision-making process.

With lack of correct information, making any decision is really difficult and with unexpected consequences. It may go out of organizational territories with even non-preferable economic/ social effects. In such a condition, the importance of information is the most important factor of decision making (Hasan Beighi, 2010). Today, it is certainly true that any decisions made by management have various financial effects. Therefore, all managers are required to have enough financial information as well. Management Information Systems are responsible for supplying and processing the mentioned information. Unfortunately, in spite of high level

of knowledge and benefitting from new computer technologies, managers consider the accounting department as just for registering accidents without any suitable benefit from financial information due to various reasons including Qualitative level of information, Lack of on-time information, difficult process of processing and so on (Albadavi, A., and Keramati, A., 2004). According to previous experiences, most Iranian organizations are faced with important problems for applying IT due to lack of special method for this purpose, lack of investment, lack of integration in different systems of the organization for required data collection in a regular and standard form, and also performing various IT projects most of which are left semi-finished as well (Tavallay, R., 2011).

There is no other opportunity for the banks; the presence of electronic banking systems is to enrich their internal processes (Back office) based upon information systems. On the other hand, any necessary integration among different processes and organizational activities makes the banks to move towards the integration of their information systems. (Norozi M, 2010). The success of any organization, institute or company with specific persons performing special jobs depends upon effective application of financial and humanistic resources (Kukalan, 2008).

Therefore, there is no more exception for the banks and financial/credit institutes. All banks and institutes are always required to have continuous betterment of their systems for better performance of their duties and managerial skills at all organizational levels including the assistants and managers of central offices, management of branches at provinces, and any branches throughout the country. Information access is an important form of social capital with necessary connections with social relations. Information is really important because it is the base of any functions. Nevertheless, obtaining required information is somehow expensive. In a "mini-mum" scale finding required information needs more care which is quite random as well. (Putnam et al., 2005, p.61)

- **decision making in organizations:**

Although efficient and effective communications are so much critical in any organizations, the real key to success is function. Our functions should be directed and handled by good decisions. Decision making means any selection process among various functions related to a problem and/or a chance. There are five basic steps for regular decision making starting with recognition of problem and/or chance. The followings are five steps of decision making:

1. Recognition of problem or chance
2. Analysis
3. Selection of suitable solution
4. Performing the selected solution
5. Evaluation of the results & further following up the case if required

There are different conditions in making any decisions at organizations with further challenges.

- **Decision Making Theories**

Theorists of organizational behaviour considered two theories in making decisions: Classic theory & Behavioural theory

1. **Classic theory of decision making**

A manager in a classic theory of decision making is a person who is functioning in a complete world of confidence. He/she faces completely defined problems. He/she knows all the possible ways to make further actions along with relevant results. Then he/she will select the best solution in finding the best result. It is obvious that this is an ideal way of decision making. Programmed classical theory has so much application.

2. **Behavioural theory of decision making**

This theory believes that human being is able to perform any function as long as they have a good understanding of the situation. Furthermore, such an understanding is not complete any more. A behavioural decision maker is faced with limited information instead of a complete world and it seems that he/she is making decisions in a non-guaranteed situation. Managers may make any decisions about some salary and uncertain issues. They have just a partial of the knowledge about any solutions and results and the first solution seems the best and satisfying. Herbert Simon named this mode as a satisfying style. The major difference in the ability of managers in making any satisfying decision is the presence of recognition limitations and their effects on concepts and recognition limitations. They will weaken our abilities in defining the problems and specifying various procedures and selecting a solution for estimation of ideal results. The mentioned recognition limitations are so much important in this modern world in a way that they will specify the great value of recognition and judgment.

- **Management of 21st Century Considers a Special Position for Two Major Policies:**

A) Competition strategy and

B) Reduction of costs are competitive export policies.

Therefore, when considering these two strategies it is necessary to apply information systems based upon IT and communications. Today managers are overwhelmed with mass information. It means the various information which is necessary to be processed and recognized and maintained and revised as system data. On the other hand, management systems and controlling tools are faced with great changes in four following fields:

1. Traditional control
2. Charismatic control
3. Bureaucratic control
4. Information control

Traditional control means any control through tradition, recognition and functions in traditional feudal structures. Controlling authorities are transferred to next generations through traditional inherited ways. Since it is a tradition, society accepted the mentioned type of controlling structure. Charismatic control means controlling through any relationship between the leader and followers. In this case,

charismatic leaders select the method and followers accept it respectfully. In Bureaucratic method, controls are applied through an organizational structure. It means a structure based upon rules and regulations with impersonal aspects and necessary acceptance. In the final method, we have control through software. There is a growth in collection of knowledge and special information.

Information control is able to find any types of information through electronic networks. It is possible for information control system to be equipped with any professional systems and all special knowledge. (Zahedi, 2001, p.123). Practically, the manager of Information System is responsible for providing updated reports and useful information to the manager of a company or institute for further programming and decision makings. For any purposes of data collections and data processing, he/she needs to use some sort of information systems and computers and even professional devices as well. As a result, system management should bear a managerial and systematic view and benefit from information systems and IT. Of course good knowledge of computers and information systems is necessary for this job (Craft & Boys, 1991).

- **Completion Process of Administrative Technology:**

Completion process of administrative technology includes various periods of administrative technology, computer technology and communications technology.

1. **First Period**

In the first period, all employers endeavour to create an environment suitable for performing all office, personnel and commercial affairs separate from factory and completely in a productive place. One of the most important indexes of this period is performing further studies about localization and space making for administrative environments (Decade 1920 and later on). In fact, it was tried in this period to separate administrative activities from production and finally all units of headquarters were separated from executive ones from a local viewpoint. The real idea was to provide a place with better conditions for performing office affairs which were mostly calculation procedures including accounting, salary and financial affairs.

2. **Second Period- Computer Technology**

In this period and upon the entrance of small computers with high level of speed and soundness, managers decided to use them and invest in the computerization of their organization due to the high speed and care which could further reduce the work time and omit human mistakes. The consequence of the mentioned decision was it enabled the users to do their daily affairs as fast as possible.

3. **Third Period, Communication Technology**

Upon the daily-increase and complete development of science and technology of computers and benefiting from its accessories and integration of these systems in each other, today office systems are included in the world systems for performing major duty. Basically, communications are

importance due to transfer of commercial information. The other specifications of this period in which we are living is the real value of updated and qualified information. Therefore, any lack of information in today's complex markets and any lack of relationships with information resources could mean taking out the organization.

Obtaining correct and quality communication means better coordination and compatibility of the organization with its environment and responding to the changes. Office automation: Most people believe that there is not a real system and framework in the name of office automation but a combination of different tools and equipment to facilitate relevant affairs is the named as office automation. However, there is a wide scope of applications and office/commercial activities from 1960.

It is really necessary to have an integrated office system which is suitable to cater the great volume of information, negotiations and transactions under different names like office systems, office information systems, end users systems and end user's calculating systems. Nevertheless, the most general and highest rated office system is named as office automation.

- **Communications from Viewpoint of Commercial Information:**

Today's office systems are integrated into world systems with major role of creating better relationships and communications. Communications are really important from the viewpoint of commercial information. It is the survival secret of organizations and continuation of their activities to be equipped with competitive tools of communicative time which are Information and IT systems. From 1960, there was progress in all aspects of application of office and trade activities. Therefore, it was necessary to have a suitable integrated office system for maintaining great volumes of information and negotiations.

Upon evaluation of office automation from various aspects, this paper intends to explain the real importance of IT, accomplishment of different information systems and accomplishment of office automation accompanied with the advantages and disadvantages of office automation, ergonomic and any differences between IT and Office automation (Yahyavi, 2011). Upon the daily-increasing development of communications and appearance of different forms, we have communicative processes and networks completely present in all affairs of life. Therefore, business affairs are not exceptions of this rule even at the farthest parts of the world through different methods (Producing of goods or services). In order not to lose one of the most important input resources (information) due to complex commercial relationships, all organizations intend to create various systems to better benefit from the current surrounding information accompanied with suitable processing for customers and meet their satisfaction.

In fact, because of the high competitive environment of business and also any changes in this field in 1990 (globalization of economy and changing of economies and industrial societies based on information and knowledge),

we need to double our attention on information systems. As a result, there is a daily-increasing importance of office automation as one of the various types of it. Now, most organizations are able to consider themselves at the highest rate of readiness to go against environmental/ domestic changes due to the high level of benefits from automation (Mirsepassi, 2010).

- **Strategic Role of Information:**

Most managers at different organizations have been satisfied with information management as the most important and effective factor in their organizational function and competitive priority. Now, it is clear more than before that information is really important and its control should be distributed to information managers. Today, higher level managers of organizations are responsible for making any decisions about information networks and other applications of technology. However, in case a higher manager of organization is obliged to make these decisions, then what is the role of information? Information personnel will bear various key responsibilities in future. This part is allocated for collection of technical specialties.

It will be applied as an intermediate of scientific and technological applications. It will provide required leadership for promoting relevant applications for submission of more services to higher management of the organization and also support the required systems for implementation of major organizational decisions (Back Hard & Pritchard, 2008). Quality of information and its efficiency is obvious in its correctness, relatedness, updating and suitability. Quick reaction of managers in making any decisions and the correctness of his/her decision are completely based upon the quality of provided information. Furthermore, feedbacks of information and made decisions will make it possible for managers to modify their decisions and empower them (Taleghani, 2003).

- **The Importance of Information & Information Systems:**

Information is one of the most valuable and major resources of managers in an organization. Like human resources, raw materials and financial resources which are really important in the production process, information has a special value in this age of information. On the other hand, information is a public fundamental and any distribution of and benefiting from it is considered as a social index (Jamshidiyan Mahdi, 2007). Any increase of this index means a national growth. Information is effective on our thinking method and conducts. Electronic technology and tools could have created an explosion of information in the last decade and certainly have a great effect on the positioning of societies and required information.

Today, not only master managers and executives but also all levels of society including researchers and specialists and businessmen do not just coincidentally use information. Information users consider it as a valuable resource equal to capital and work force. Since information is an important and valuable source and a base for all organizational activities, it is necessary to provide some kind of system to

make and manage it. The final goal of the mentioned systems is ensuring about the correctness and credit and reliability of available information at required time and in an applicable form. Today's Information Systems play great roles in all fields of a company. Successful companies are equipped completely with information system for their daily activities. The real challenge of companies is the lack of dependence of their Information Systems on computers, but the major goal is effective application of information system in management affairs. As a valuable resource, information systems could increase the abilities of managers and personnel accordingly (Tafreshi, 2013). Information has a tangible effect on our ideology and behaviour.

Electronic technology and tools and computer were the source of explosions of information in the last decade with great effect on the situation of societies and required information. Today, not only major and executive managers, but also all level of society including researchers, scientists and businessmen, stand no chance to only use information. Information system users consider it as a valuable resource equal to the labour force. Therefore, information is important and valuable and a base for all activities of an organization, hence it is necessary to provide various systems to produce information and manage it accordingly.

The final goal of these systems is ensuring about the correctness, validity and narration of the accessible information in a usable form. Today's information systems play a great role in all activity fields of a company. Considering that most successful companies show that all of them are equipped with information system for required management, information systems are valuable resources for increasing the ability of managers and personnel and upgrading the effects and utilization of the organization.

- **Management Application:**

Advanced information technology will enable managers to make better and more relations with the organization, environment and each other. Management Information System is a subset of the overall internal control of a business covering the application of people, documents, technologies, and procedures by management accountants to solve business problems such as costing a product, service or a business-wide strategy (Hall, 2008). The followings are relevant benefits of this technology for management process:

It is required for managers to allocate more time and forces in making relationship. By the use of advanced information technology it is possible to reduce the mentioned time and forces especially when they are physical far from each other. For instance, when a person intends to produce and supply a new product it is necessary to send out messages in attracting various ideas about it. He/she receive more than 150 proposals from various parts of the world and people they do not even know. Furthermore, according to the results, it is obvious that advanced information technology has increased the number of contacts among high and low ranking managers of an organization. Middle rank managers are able to communicate directly with the organization manager. In addition, it is possible for an

assistant to make direct contact with the project engineer. In one of the greatest retail shops of the world in the field of confectionary and sweets all personnel communicate directly with the managing directors from various units and branches just by the use of electronic relations. As a result, they will inform him about their attitudes and viewpoints about any competitors' products and the reactions of customers. By the help of this system, Xerox Company could increase the number of participation by its master managers in decision makings from 15 persons to 100. It has further decided to increase it to 500 managers.

Now all organizations are completely aware about the great effects of advanced information technology on organizational structure. Followings are the results of various research in this regard:

### 1. Reducing the Height of Organizational Pyramid

Advanced information technology is reduced from various levels of management in most organizations. When an organization in London applied such a technology, it endeavors to give more authorities to the personnel and members of the organization instead of exactly following the administrative hierarchy and reduce the management levels from 13 to 4. The other example is "ATENA" Insurance Co. in which information technology is applied to replace old supervising systems with expired authorities' hierarchy.

### 2. Better Coordination

Perhaps one of the greatest results of advanced information technology is creating more relationships among managers even when their offices or shops are located at various parts around the world. There are three methods that resulted from this technology (electronic messaging system, Executive information system and Remove round tables), which enable managers to for relations with each other and be aware about their activities and results of work. Computer systems have provided new connective channels through which all managers could benefit from and find group behaviours. Such a technology enables managers to remove any obstacles and create a form of group feeling, and further enhance the organizational identity (it means the same thing which was absent before).

#### • Increasing the Number of Special Personnel

Complex information system application requires professional and trained personnel in order to work with these systems and also to maintain them. In most cases and upon applying this technology, all organizations are obliged to replace their workers with some professional and special persons. For instance, upon applying the "Customers' Servicing System", a banking group in North America had no choice but to increase the number of its professional personnel from 30% to 60%.

This system was replaced with great numbers of office forces. It was necessary to have a small number of personnel for letter writing, archiving, and form filling. The remaining changed into waiting personnel. High and middle rank managers are able to send any information by the use of this technology (Deft, 2001, p. 250-252).

#### • Computer-Based Information System

There are five environments for applying the computer-based information systems. Some of the first applications of computer and information systems are: Processing of accounting data, Management Information Systems (MIS), Decision Supporting Systems, Virtual Dept. and Knowledge-based systems. Processing of accounting data was the first applications of computer and information systems. Management Information System (MIS) means a controlling and renovation system of information from the environmental world and commercial functions in a way to prepare required information for making any decision, programming, and control by managers.

According to Civan and Kara, the most important and oldest of the present systems in businesses is certainly the management information system. Management and information are two inseparable concepts, showing the impossibility of a rational execution of management activities without information (as cited in Daştan & Sürmen, 2007, p. 6). A management information system (MIS) consists of many subsystems.

Accounting information system is one of these subsystems and is the oldest one (Daştan & Sürmen, 2007). Managers are always searching for information. Their decision making process is based upon relevant data of the subject. In the past, most of their information resources were random and unsure which were supplied through various methods and by upper ranks or lower grade personnel and/or other personnel of the organization. It may cause lack of assurance and reliance on the correctness of information. That was because the mentioned people transferred the information to the persons in charge with some additional detail or omission of it. Therefore, there was no more trust in it. There is a historical process for mobilizing a correct and confident information system in increasing the abilities of management in making correct decisions and programs and control of the organization. The mentioned historical process started with the double administrative concepts presented by Lucka Pakellily in 1494.

There was a slow process for management information systems up to 20th century. Perhaps the real reason was the human's lack of ability to maintain and restore information. Upon the development of computers with high capacity, speed, and care in the middle of 20th century and the application of various concepts of management information, there was another process with the following results affecting the activities and duties of commercial organizations throughout the world:

1. Centralized management by focusing on centralized information channels and benefiting from advanced technology
2. Designing of information and submission of required reports in making management decisions, programming and organizational control
3. Designing of management information system by focusing on controlling information system of project control management/The real goal of MIS systems is increasing the process of submission and

management of information and reduction of any doubts in solving problems at different levels of organization through the feedback systems of information and its reflection for the completion of new data. MIS includes three parts: Management, Information, and System. MIS will not only support managers in strategic affairs but also provide required information for them in making repeating and daily decision and in finding better information to make effective decisions. MIS will provide an image of discrepancies and violations of determined programs.

Such information are supplied for managers through various re-ports and logical images for further interpretation and analysis. The different sub-groups of MIS system include Human Force Management Information System, Financial & Accounting Management Information System, Production Management Information System, and Marketing & Sale Management Information System based on common and mutual headquarters. MIS managers are obliged to remain informed about the real world and current systems of the organization in order to play effective roles. Therefore, they should be provided with correct information. One of the important roles of a MIS manager is good knowledge and interpretation of environmental and external factors of the organization.

MIS managers are obliged to be aware of current systems' handy values as well. A MIS manager is practically reporting to the master executive assistant any plans and controls of the company. In most companies, we have MIS assistant branch reporting directly to higher management (Momeni, 2006, p. 32: 23-26). Due to various benefits of MIS which include closer relations, more exact control and data collection, and quicker processing of data and changing them into managerial information, these systems are applied for organizational programming, leadership, and re- porting /controlling of managerial functions with the highest rate of efficiency in the shortest period of time. Now it is necessary to have an intermediate manager i.e. the MIS, for better submission of services to management. Those institutes equipped with primary MIS systems learned many other things. It was specified that managers are the major obstacles in benefiting from MIS systems. As a major group, managers do not have much information about computers because they knew how to solve their problems: and they paid little attention to information in solving any problems.

As a result, it was really difficult to explain what a MIS system is to managers. It was intolerable for specialists of information because they had little knowledge about management. They did not know which questions should be asked. Gradually, managers found different experiences about computer and applied processes. Alternatively, information specialists learned many things about management bases. In order to have more compliance with necessities of managers, MIS systems were subject to more modifications and development. Finally, there was a powerful position for MIS systems as a major ground of benefiting from computer. MIS could solve problems in two

major ways: It may provide information resources in the field of the organization. Then, it may help to recognize and understand the problem. It is intended to enable managers to specify any probable problems in future. The major weakness point of MIS system is lack of meeting special necessities of persons. Most of the time MIS systems could not provide exact information and the real meaning of supporting system is in response to such necessity (Mack Lloyd, p. 434, 411-415).

Since MIS systems are under the effects of computer and automation, there are some unexpected changes in the behaviour of personnel which points to the required attention to human factors in the organization. Those who have installed data processing systems in their companies worry a lot for the first time. They worry about computers replacing their jobs. They worry about the hidden entrance of MIS system to their personal limitations. The simplest way for explaining their fears was information from the manager.

Of course most of them hide their fears. In the first case, some of the managers were also afraid of the new system. In such cases, a manager does not prefer to share his/her information with others. Their reason is that they have their own data collections and their further ability to use them. It is necessary to have a program to reduce and/or remove any fears among managers. A manager may minimize any fears of the personnel with the following procedures:

1. Benefiting from computer as a tool for upgrading the jobs and submission of repeating works to computer and any services which may challenge their abilities
2. Benefiting from official communications for more information of personnel
3. Making a confident relation among personnel, information specialists, and management
4. Specifying the goals of company in line with personnel needs (Mack Lloyds, p.348-349)

Finally it is obvious that today, MIS duties outweighs the managers' and MIS is servicing the trade and companies. Today, all companies are equipped with MIS department and MIS assistant.

#### • Office Automation

There is not a specific definition for office automation because they are defined against various viewpoints of the applicant. It means that there are limitless definitions for office automation systems. Followings are various definitions in this regard:

Office automation includes all official and unofficial electronic systems for providing any relationship among people inside/outside an institute and vice versa. The keywords that may separate office automation from data processing are Management Information system and Support. Office automation is to facilitate any relations in both oral and written forms (Raymond, 1998). OIS (Office Information System) will support office affairs through IT. Modern IT(s) include different parts of MIS for providing required tools for more communications and coordination among workers and personnel through an effective

management of notes and messages and electronic sessions (ZWASS, 1992).

### 1. Necessary Integrated Usage of Office Automation

Due to the high level of office negotiations and circulation of letters and notes in various organizations and administrative institutes, any presence of non-suitable system for office negotiations may cause wasting of time and energy and increasing the costs and finally lack of efficiency of the organizations. Only a suitable and quick office system may reduce a major part of replies that could cause better economy and productivity. In case of correct and complete implementation of an electronic organizational pattern, it may change an organization without any needs for paperwork along with quick and efficient reactions (Beheshtian, 2008).

### 2. First Step towards Electronic Organization

Prior to applying office automation, it is necessary to understand that all organizational managers should reach to this result that there is no more opportunities for continuing with the current situation. They should really decide on applying office automation otherwise, not only will there not be a useful condition for benefiting from all the tools and facilities for project performance, but also it may be stopped or delayed with the smallest disagreement and problems. There are various Internet & Intranet facilities in an electronic organization through which it is possible to have correct form of information with both speed and correctness all together. There will be an excellent rate of time and energy saving through an efficient electronic organization. For instance, it not necessary any more to have any coordination among managers for holding meetings and making any decision because most decisions can be made through e-mails as well (Asgharpour, M.J., 2008).

#### • Advantages & Disadvantages of Office Automation:

Required speed and correctness of jobs are the most important condition for benefiting from automation system in most organizations and in spite of its other benefits. Due to a wide scope of functions of an organization, it is necessary to have developed communication channels at high speed. Therefore, office automation will provide short communicative channels for managers.

Generally, there are two groups of direct and indirect advantages of office automation systems which are as follows:

#### 1. Applying of Technology in Office Automation

There is an issue in advanced information technology known as Workflow automation through which all people may exchange notes and documents through the relevant soft-ware (including buying/selling statements, checks or customer orders). For instance, it is possible to prepare a costs statement by using a computer to furnish the required information through e-mails. It is possible to perform all affairs without the interference of human being and just

through this system. In addition, small companies will perform their jobs by adopting this system. There is an important question for all managers of organizations; "How is it possible to use high degree of control power?" As it was mentioned before, advanced IT(s) is able to display all information of an organization for the master executive manager. Now there is another question on whether organizational manager is obliged to use such high power for more centralization of affairs or controlling of functions or he /she should provide more information for members of organization to work with more independency? Advanced information technology will provide any types of information about customers, market, type of services, and unique efficiency. Some of the organizations are benefiting from this new technology in providing serious administrative hierarchy, centralization of decision making process, and harmonizing of jobs. However, in most cases, mentioned organizations are using this technology for non-centralization of organization affairs. Then, it is obvious to have further results out of management processes and designing of organizations (Deft, 2001). Integrated Office Automation Systems found a sensitive role in modern administrations. Word processors have become substitutes to previous typewriters and then, electronic work sheets may render useless the ledgers. Databases removed any types of paper information with personal information maintenance programs and also extensive paperwork (Green, 2001).

#### 2. Office Automation Systems (OAS)

Office Automation Systems are responsible for daily processing of information related to administrative activities and duties and sub-directors of organization. There are various tools and general software in these systems including: MSWord, Electronic work sheets like Quattropro, MExcel, Power Point and personal data banks like MSAccess. Other facilities like e-mail, fax and so on are used in office automation for making any relationships and performing various facilities and sending of messages. All these tools are classified in electronic communications system without any explanations in office automation systems. Perhaps the most common information systems are the mentioned office automation ones which are used in most organizations. However, the important point is the lack of compatibility with most similar software in different organizations. One of the important duties of IT development at organizations is the standardization of work formats and compatibility of various automation systems in compliance with domestic and foreign environments. Some of the organizations are using special office automation software in an integrated and intelligent way for further circulation of notes and negotiations and decision making plus secretarial function in a systematic and automatic form. Other organizations are benefiting from independent tools of office automation systems without any network and/or non-systematic relation. Microsoft Co. manufactured a group of compatible and excellent types of mentioned software under the title of Office with continuous development of their application. Regarding network installation facilities of Office collection, it is easily possible

to design and support most of the office automation services as well (Zargar, 2004, p. 31). From a public viewpoint, IT is equal to the mentioned concepts. Office automation, computer technology and further connections are really for the facilitation of administrative affairs and upgrading of their efficiency. There are considerable effects in the application of computers for supplying notes, maintenance and recycle of them and also the sending of data to various parts of organization and extracting them. It is only possible to have paper-free offices and useful results just with office automation systems. With the rising number of e-mail systems, office personnel could send messages to each other. Furthermore, because there are of common files among administrative personnel, there are some electronic boards as well. These files are called e-mails through which people are able to put their general messages on them. These facilities are really interesting in a way that with the promotion of technology it is possible to put various high quality diagrams in these messages. In addition, with the reduced costs of negotiations it is possible to transfer contents, images and diagrams through telephone lines. In parallel with these advances in computer technologies, there is an upgrade in the office audio systems. Office telephones are connected to private and very complex systems. In addition, there are some group writing systems. The mentioned systems will enable personnel to work with each other on internship and group basis. The real goal of group writing systems is the group effort of people in creating access to some of others' works. There is a development in video system applications. Large organizations are able to use video conference in order to enable their personnel to make face-to-face relations with each other without any travel. Firstly it was used for any relations between various managers at two or three locations. Recently, these systems are used for creating relations among thousands of people just on a specific subject. Office automation system includes job table up to process management with close relationship with secretariat, processing systems, and archiving systems. As a result, it is possible to organize all office automation collection through software systems. It is necessary to pay attention to the possibility of organizing all functions of an organization through a management process and an integrated software system and by the use of pre-determined tools as well. By the use of a management system of procedures we may perform a circulation process of all forms available in Transactions Processing Systems (TPS) through job table system. As a result and without applying any paper forms, we may define required "Approvals" and complete the same by relevant circulation of job table system. Therefore, office automation is higher than applying just one job table system in the entire organization. In addition, it is considered as a part of it as well. Furthermore, we should note that by the use of an integrated system with related organizational processes, we may move towards a complete meaning of organizational position in which we may expect quick circulation of information without applying even one sheet of paper.

### 3. Automation & Managerial Decisions

Personal idea of a manager is a small sample of his general activity. As a result, when he is intending to make a modifying function, he should take care of the case due to the following reasons: Firstly because it is perhaps not necessary to make modifying functions at all. Secondly when it is necessary, perhaps it is impossible to apply because there is not such incident at the observation time. Here automation is really useful. Automation provides a general and good image and may assist him in making any decision (In comparison with personal observation basis). The current process is about mechanization of secondary activities like the collection of wastes, inspection, counting, oiling and further activities' of tools control. Furthermore, any mechanization process is used mostly for various activities like engineering planning, stock control, and benefiting from 50-years of machines in loading of order receipt systems and further tests (Parkinson & Restom J. p. 145).

#### ANALYSIS OF DATA

Upon specifying considered research method by the suitable tools and performing relevant data collection, researcher is obliged to benefit from suitable statistical techniques in compliance with research method, type of variables and so on. Then it is possible to classify and analysis all collected data. Finally he/she is entitled to examine all theories for finding a suitable answer (solution) for the question of research (Systematic efforts for finding the solution). (Khaki, pp. 303-304, 2003). Information means processed or meaningful data. All data will be changed into information by the use of any data processor. Data processor is a key factor of conceptual system. Data processor includes computer and/or non-computer elements and /or a combination of both factors (McLeod, pp. 15-16: 1998). Today, data analysis is the most important part of most researches based upon collected information. Raw data would be analyzed by the use of statistical software and submitted for the users after processing. There are two statistical analyses for any collected data including explanatory & conceptual. Firstly it is possible to find a good knowledge about demographical situation of respondents by the use of explanatory statistics. Then we may find any cause & effects relations among current variables through conceptual statistics. Statistical analysis of this research is performed by SPS software. It has been tried in this part to specify all performed statistical functions in the format of a questionnaire accordingly. Data & information are two bases of processing systems as follows:

Data means any symbols and signs of occurred realities. These symbols are like various words and forms. Information means the knowledge of receiver. If a message has not such a characteristic, it would be assumed as data from viewpoint of receiver. There are various forms of information including language, behavioral signs and other forms. Also there is estimated concept of information and data. Data processing includes registration, formulation, combination, calculation, concluding, reservation, recycling and re-production.

**a) Data Analysis**

Data analysis means a multi-step process through which we have various statistical data collection tools including summary, coding, classification and finally processing for making different types of analysis and communications among these data and testing of any theories. (Kampen wood Kiwi, Luck Wan & Raymond, 1999). Concerned data is refined from both conceptual and experimental viewpoints. Statistical techniques have a great role in conclusions and modifications. Although analysis processes are different from various aspects like type of research, research issue, nature of theories, type of theories, applied tools for data collection but they have common steps. In order for any data analysis according to the pre-determined goals, all data are explained in special statistical numeric forms. Then it is applicable to test research theories by the use of suitable statistical patterns. The final conclusion will be applied at the final step as well.

**b) Statistical Population**

We should confirm statistical population of this research includes all managers of headquarter of Bank Melli Iran and the number of sample population of managers is 60 persons. All of them received questionnaires for our statistical analysis.

**DESCRIPTIVE FINDINGS**

Descriptive and summary statistics is used to describe the profile of the respondents (age, gender, educational qualification, job experience.

Tab.1. Descriptive Statistics

	Variables	N	Mean	Std. Deviation
Demographic	Gender	60	1.3500	.48099
	Education	60	2.1333	1.11183
	Job	60	9.8333	2.97542
	Output Letters	60	3.3167	.89237
Independent	Number of Input Letters	60	3.9167	1.18310
	Concept	60	4.1000	1.08456
	Work Hours	60	3.5500	1.24090
Dependent	Improve of DM	60	13.6500	3.02994

On-Time DM	60	12.6167	3.21064
Accurate DM	60	13.6833	2.74629
Economic DM	60	11.2167	2.91746
Valid N (list wise)	60		

**DESCRIPTIVE STATISTICS OF MAJOR VARIABLES OF RESEARCH**

Finding more recognition about major variables, this part emphasizes various Descriptive results like average, minimum/maximum grade in following tables.

Tab.2. Frequencies of Dependent Variables

	Improve of DM	On-Time DM	Accurate DM	Economic DM
N	Valid	60	60	60
	Missing	0	0	0
Mean	13.6500	12.6167	13.6833	11.2167
Std. Deviation	3.02994	3.21064	2.74629	2.91746
Variance	9.181	10.308	7.542	8.512
Range	14.00	13.00	13.00	12.00
Minimum	6.00	7.00	7.00	6.00
Maximum	20.00	20.00	20.00	18.00

Tab.3. Frequencies Statistics of Independent Variables

	Output Letters	Number	Concept	Hours
N	Valid	60	60	60
	Missing	0	0	0
Mean	3.3167	3.9167	4.1000	3.5500
Std. Deviation	.89237	1.18310	1.08456	1.24090
Variance	.796	1.400	1.176	1.540
Range	3.00	4.00	3.00	4.00
Minimum	2.00	1.00	2.00	1.00
Maximum	5.00	5.00	5.00	5.00

Tab.4. Pearson Correlation between Variables

Variables	Improve of DM	On-Time DM	Accurate DM	Economic DM	Output Letters	Letters Number	Concept	Work Hours
Improve of DM	Pearson Correlation	1	.310*	.526**	.392**	-.065	-.292*	-.322*
	Sig. (2-tailed)		.016	.000	.002	.622	.024	.972
	N	60	60	60	60	60	60	60
On-Time	Pearson Correlation	.310*	1	.307*	.313*	-.353**	-.147	-.457**
	Sig. (2-tailed)	.016		.017	.015	.006	.263	.341
	N	60	60	60	60	60	60	60

DM	N	60	60	60	60	60	60	60	60
Accurate DM	Pearson Correlation	.526**	.307*	1	.569**	-.380**	-.332**	-.274*	-.296*
	Sig. (2-tailed)	.000	.017		.000	.003	.010	.034	.022
	N	60	60	60	60	60	60	60	60
Economic DM	Pearson Correlation	.392**	.313*	.569**	1	-.339**	-.392**	-.291*	-.413**
	Sig. (2-tailed)	.002	.015	.000		.008	.002	.024	.001
	N	60	60	60	60	60	60	60	60

**TESTING OF RESEARCH THEORIES**

Following descriptive statistics of variables, we have tested hypothesis by the use of different statistics tests to make any decision about their acceptance or rejection. Table 4-17 summarizes the descriptive results of the correlations between variables that studied in this study. As we saw in this table, some of predictor variables have significant correlation with criteria variables. Special all of input variables have significant effect on Economic Decision Making.

**STATISTIC DATA AND HYPOTHESIS**

Implementation of Administrative Automation has impact on improvement of Decision making.

Tab.5. Correlation Matrix of Variables on Improve of DM

Dependent Variable	Model	Regression	Sum of Squares	Df	Mean Square	R	R2	F	Sig
Improve of Decision Making	Enter	Regression	88.192	4	22.048	.404	.163	2.64	.041a
		Residual	453.458	55	8.245				
	Total		541.650	59					

- a. Predictors(Constant), Work Hours, Output Letters, Concept, Letters Number
- b. Dependent Variable: Improve of Decision Making

The results of multi-variable regression analysis (4-8-1 table) on Improve of Decision Making as a dependent variable showed that there was significant correlation between independent variables(Work Hours, Output Letters, Concept, Letters Number) and Improve of Decision Making (R=/.404) (R2=/.163). So variables can be able to explore 0/16 percent of Improve of Decision Making variance. Examinee of this mount coefficient by Fishers F test showed that Obtained F [(F=2/67)] was significant at level (p<0/.000).This results explain coefficient. This

number is powerful and meaningful. So the first hypothesis of this study was confirmed.

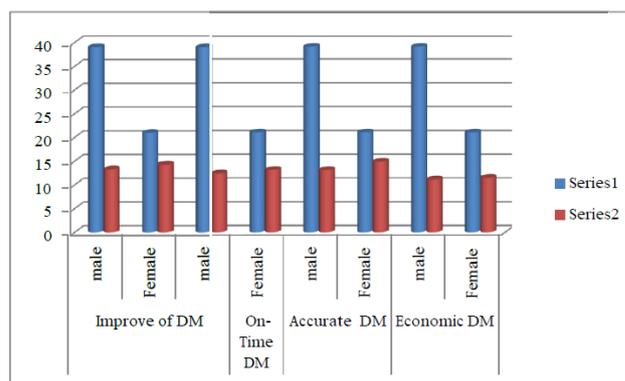


Fig.2. Comparing of four Decision Making subscales between males and females

**DISCUSSIONS AND CONCLUSIONS**

Findings and results are the most important parts of any research. Therefore, it is possible to find better hypothesis towards the final idea. Any presented recommendation may call on us to change and amend our research (as the non-changeable principle of materialistic life).The present research provides a group of findings resulted from research basics in the field of office automation systems.This paper intends to answer this question, “Whether a group of variables are effective on another group or not?”Upon specifying the research method, all data analysis were performed through statistical tools and field research. The obtained results have been explained in details in previous chapter.Briefly speaking, we can say that there is a significant relation between automation system and decision making variable. Therefore, higher level of automation knowledge may result in making better and logical decisions. It is one of the special characteristics of any organizations which may use automation in a defected form. Of course, it is necessary to mention that any application of automation is not just for benefiting from computer equipment but also for applying a written systematic method in programming of control and reporting and interactions. Therefore, we will make an end to our research by concluding all hypotheses and subjects of

research and present various proposals for optimized usages of information systems.

Hope other researchers have more in-depth thinking in this field as well.

**• Descriptive Results**

According to the research method, Sample of present research are among 60 organizational managers who benefit from the automation system in Iran Melli Bank. There were about 65% of male respondents and 35% female. The majority of them in this sample are male. Therefore, it is obvious that males are benefiting from automation system more than females in this population.

**• Demographic Variables**

Corresponding to the descriptive results, most managers have Master of Science degree with a percentage 36.7%. After that, there is another group with academic level of Bachelor Degree with 31.7%. 13.3% of respondents have High School degree and 18.3% of them have PhD. Therefore, it is concluded that most of the managers of Iran Melli Bank who are benefiting from Administrative Automation have university academic records. The highest Job experience of respondents was 22 years at 20% respectively. The minimum working experience of managers were 4, 14 and 11 years (with 3 persons = 4.2%). In other words, most headquarters managers had between 15 and 22 years of job experience.

Freedman test was applied to find any significant or non-significant difference between hypothesis of research and mentioned questions. According to the results, it is obvious that hypotheses 1-2-3-4 have been calculated and the results were 0.41-0.000-0.02-0.006 respectively. They are more than considered error level of 0.05. All mentioned hypotheses are located at H0 area. Therefore, it is concluded that there is no significant difference between questions and mentioned hypothesis. It is possible to confirm any relationship among them.

Tab.6. The Result

Research Question	Hypothesis	Objective	Finding
[1] What are the factors in success of automation system in betterment of decision making of managers in the headquarter field of Bank Melli Iran?	[1] Implementation of Administrative Automation has impact on recovery of Decision Making.	[1] To evaluate any effects of office automation system on recovery of decision making process.	[1] Confirmed As have significant effect.
[2] To what extent does automation system help in increasing the correctness rate of decision making of managers?	[2] Implementation of Administrative Automation has impact on correctness rate of Decision making.	[2] To identify if automation system helps in increasing the correctness rate of decision making of managers?	[2] Confirmed As have significant effect.

[3] How automation system plays an important role on updating correct decision making process of managers?	[3] Implementation of Administrative automation has impact on updating Decision Making.	[3] To determine the role of automation system in updating correct decision making process of managers?	[3] Confirmed
[4] To what extent is automation system effective on economic condition of decision making of managers?	[4] Implementation of Administrative automation has impact on Economic Decision Making.	[4] To identify if automation system is effective on economic condition of decision making of managers?	[4] Confirmed

**CONCLUSION OF RESEARCH**

With regard to the major issue of this research which is evaluation of any effects out of automation system for the betterment of decision making of managers, (Headquarters of Iran Melli Bank), the following results are obtained:

Automation system has a positive effect in increasing the making of correct decisions by managers. Automation system has a positive effect on updated decisions of managers. Automation system is effective on making economic decisions. Therefore there were no evidences for rejection of hypothesis with mentioned indexes of correctness, updating and economic condition. The main point is that the research process has not ended. Perhaps it will be proved in more research that the obtained results were correct (Iran Nejad, p. 24: 2003). As it was mentioned before, there is no a significant difference between both variables. In other words, there is a significant relation between both parameters of research. Therefore, this part is about the analysis made using the statistical tools.

According to the studies, there is a powerful relationship and significant correlation between automation and decision making. Generally the effects of automation on better decision making - update decision making – correct decision making and economic decision making are 96%, 100%, 98% and 994% respectively. In this research and for easy task, a questionnaire with packs of questions was used in compliance with the culture of statistical population and further data analysis. There is just a considerable result in the final table rather than a significant relationship with high assurance percentage.

**Recommendation:**

We consider any positive effects of automation systems, but what is important is the success rate of the results. The first step in finding a realistic view about evaluating office automation in organizations is writing effective indexes for the evaluation of any office changes through the establishment of developed organizational systems. This required scientific support of the organization. Findings of these researches have great roles in recognizing the strength

and weak points of automation systems at banks and similar organizations with harmonized and similar relations. Therefore, all researchers are obliged to select any issues with technical coordination, guidance and supports for further presentation in total banks.

As a result, a wider scope of organizations will benefit from their research. Of course, the next researchers will find new and effective subjects in solving the fundamental problems of organizations. Upon quick technological development of information sciences and development of organizations, there are quick environmental changes in the internal/external relations of current organizations in comparison with the past. On the other hand, making any suitable decisions requires updated and exact information in processed form, accordingly. Today, most of the advanced societies perform this task through information systems. Automation is important for these organizations because it is able to receive raw data and process it and then provide the required information for further decision making. Unfortunately due to the lack of information and enough knowledge in developing countries like Iran about the real position of automation among most of the users and managers, there is no optimized usage of this system.

1. It is necessary to have a revision of working processes in order to find complete compliance with automation system. Therefore, there is a reduction in any imposed costs to the organization.
2. There is prevention from parallel working at secretariat including simultaneous creation of paper and software records. That is enough to cause software backups.
3. There is an acceptable attitude about office automation among middle managers and their headquarters. Generally managers consider this system with positive effects on organizational functions. Nevertheless, it is necessary to provide more information about any effects of this system on the total organizational functions.
4. The concerned organization of this research is not an exception. Although due to some changes at managerial levels within recent months, there are attentions to automation especially at high ranking management. However, the importance of this system is not clear for middle and operational managers. Since middle managers are available at all headquarters and they are also the connective rings among other managers, the following proposals are useful for better applying of this tool and to find the considered goals.

#### Organizational Recommendation:

1. Required training courses for managers for optimized usage of automation
2. Informing organizational managers, especially middle managers, about advantages of automation
3. Creating and designing of automation in a way to receive updated information and submission to managers after processing

4. Establish a computer network for further interactions and informing all managers and persons in charge
5. Documentation and designing of automation procedures for more harmonization and profitability
6. Providing single strategic method of applying automation at organization and covered levels

Finally, all managers are recommended not to ignore any investment and training in office automation in order to have better performing of organizational activities and with regard to quick progress of IT and the importance of information in better decision making. Although there are some obstacles and difficulties at first, with little attention to automation advantages and its effects in decision making it is as easy as possible.

#### Different Recommendation for Future Researches:

This paper tries to evaluate any role and effects of automation on decision making process. However, researchers believe it is necessary to have other research in this regard for finding newer results and findings.

1. It is necessary to make wide range and specific research about automation effects on other parameters like profitability, reduction of costs, human force, customer satisfaction and ...
2. There should be some applicable research about applying automation systems in two separate groups for instance trained & un-trained persons. Then the results would be compared based upon any costs of applying of automation system.
3. In order to make a field part of the research, it is necessary to refer to any centers and organizations equipped with automation systems in order to analyze and evaluate any effects of them through standard indexes. This may provide better and ensured results out of field research.
4. Since there are different decisions made by managers on decision making at any levels of the organization, it is proposed that a separate research about the effects of automation on various types of decisions is conducted
5. Simultaneous with modernization of governmental departments or private companies at different dimensions, it is necessary to have an analysis about any effects of automation system on other independent variables like changes in organizational structure and internal architecture, outsourcing, adjusting various dimensions of organization and personnel and other inevitable modifications.
6. It is a requirement to evaluate and analyse any effects of office automation in under-developing countries from both mental and cultural viewpoints and by applying field and measuring researches. This is because of the unknown situation of any positive/negative effects of office automation on people.

#### Limitations:

1. Lack of similar studies about this subject due to its new condition
2. Difficulties in specifying the index and changing the qualitative factors into quantitative ones for quality measuring
3. The presence of negative hypothesis about the results of giving ideas among managers of administrative and governmental structures will enrich this idea that it is better not to blame the current structure and not to explain their general critics. Such a condition may prevent any benefits from the fundamental function of research, which is providing new attitudes for optimized functions and also expected effects on governmental structures.
4. Small number of organizations implemented various office automation systems with regard to minimum standards at Iran. Therefore, it may restrict any selection rights of re- searcher with further negative effects on qualitative and quantitative levels of reliability and validity of research.
5. Making any research through occupation may cause long-term of research. Therefore, those students who study in compressed courses, without any occupation, have more free times in comparison with others who are occupied as well.

#### Acknowledgement:

I would like to express the deepest appreciation to my supervisor Dr. Muhammad Sabbir Rahman, for providing valuable information and corrective suggestions required for the study. Without his guidance and persistent help this paper would not have been possible. All the people whom that have contributed to achieving my MBA degree and making my time at MMU University an unforgettable learning experience.

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