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ASSESSING THE EFFECT OF MANAGEMENT INFORMATION SYSTEMS (M.I.S) ON PRODUCTIVITY OF URBAN MANAGEMENT

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ABSTRACT

The main objective of this research is assessing the effect of management information systems on productivity of urban management. The statistical population of research is consisted of all managers of Ilam Municipality. With considering this fact that the number of managers is limited, the project is done by consensus instead of taking samples of addressed population, and the research method is descriptive. The method of collecting data is based on two ways: library inquiry and questionnaire, methods of analyzing data using descriptive statistical methods. The result of analyzing data shows that implementing M.I.S can improve the efficiency and effectiveness of organizations (Ilam unicipality) and consequently it will improve productivity.

Key Words: *Management Information System, Productivity, Efficiency, Effectiveness, Urban Management*

INTRODUCTION

With considering the development of information technology and the role of information and data in modern organization, the role of M.I.S have been important more than ever. The procedures like managing, organizing, leading, motivating, harmony, control will take no sense without the help of this system. M.I.S is a system which is created with the consequent data of processed and useful interactions of information organization to be used in making operational, tactic, and strategic decisions.

The objective of M.I.S is increasing the course of managing data, decreasing the rate of guessing in solving problems at different classes of organization by using the information feedback systems and reflecting the information recycling in the completion process of new data to system, deleting repeated operations, improving decision making, improving interactions with environment, improving inter-organization communications, improving management process, improving control process, decreasing the need to the command sections in units, using classified and analytic information data in order to manage them and managers can use them to make good decisions, facilitation, guarantee and accuracy of information.

The modern information system is a system which works based on supplying data to arrange the needed information. The important point is that the only way to continuation of the information systems and getting the required productivity in very sensitive conditions of today is viable and efficient using information systems and information productivity. The success of any organization in fulfill their objectives requires productivity

The Effect of Management Information Systems on Organization Productivity

The effect of information systems on organization productivity will be revealed in two areas:

Increasing the Organization Efficiency by:

- Processing the information by machine which is fast, precise, and low cost
- Preventing from redoing and recollecting information
- Standardizing data and information concepts
- Warning to users about the deviation and mistakes, and preventing from losses

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Increasing the Organization Effectiveness By:

- Increasing the motivation of organization's employees and manifesting their creativities.
- Resisting and dominating employees to environmental changes
- Making effective decision for choosing strategies
- Limpidity and clarity of performance course and reducing mistrust

The Statement of Problem

In the late decades, scientists studied more important factors across the development of information technology and they believed there are very crucial factors which must be considered in organizations.

One of these factors is the organization productivity. The management specialists have counted different factors as the effective factors on organization productivity. Yet, what improves the decisions more viable, and increases the organization productivity is having accurate and complete information as one of the strategic recourses of organization, informing people about the objectives, policies, plans, decisions, and the custodian organization of urban management as a factor to complete the communication cycle between organizations and citizens.

One way to help the custodian organization to fulfill the considered objectives is attracting people participation and increasing their motives. This research, considering the importance of organization productivity and the effect of different factors like M.I.S on it, is done for these reasons.

- The importance of effect of the performance of custodian organization of urban management on people individually.
- Movement of government toward electronic government and creation of electronic cities to supply and present better services by internet to respect to customers and to increase the rate of satisfaction among different classes of society.
- Dissatisfaction of customers for administrative excessive corruption, making the execution of rules on preference and taste, low speed and long time of presenting services, carelessness of employees in doing their duties.
- Dissatisfaction of employees for of lack of limpid and clear performance course, the possibility of assigning competent employees at higher posts, having no possibility to grant suitable rewards or punishments to successful and unsuccessful employees and managers, lack of job dissatisfaction and job motivation because of too much customers, lack of conformity in salary and the amount of work which was done, having no possibility to participate in making decisions, the possibility of focusing on organizational operations, having many decision making centers at medial levels because of command sections.
- Dissatisfaction of managers because of having no accurate and reliable information, re-doing and re-collecting the information, having no facility to transport the information required for decision making, carelessness and disharmony in collecting and processing information, having no good system to distinguish successful and unsuccessful employees, having no viable system for warning to employees who do their jobs with carelessness.

Necessity and Importance of Research

The importance of this research can be due to the importance of high level productivity (efficiency and effectiveness) of custodian organization of urban management for having so many customers, different services, having relation with more than 70% of customers, the effect of M,I,S on improving decision-making and management of organization at all managerial levels. The only way to continuation of any organization is productivity and this can never be achieved but by actions and operations based on accurate, up-dated information.

Research Objectives

The research objectives are:

- Studying and assessing the necessity of implementing of M.I.S and its effect on organization (Ilam municipality) productivity, and determining its importance from managers' point of view.

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- Declaring the position and the need of organization (Ilam municipality) to M.I.S with respect to dynamic and restless environment.

Research Questions

This research, with respect to the objectives, is to answer this fundamental question:

- Can the implementation of M.I.S improve organization (Ilam municipality) productivity?
- Since efficiency and effectiveness are two integral parts of productivity, some subordinate question are raised.
- Can the implementation of M.I.S improve the organization (Ilam municipality) efficiency?
- Can the implementation of M.I.S improve the organization (Ilam municipality) effectiveness?

Research Method

The research method is descriptive. The objective of this type of research is describing the reality of research and merely studying what had been achieved both real and concrete.

Research Area

The research area of this research, based on subject, is M.I.S and its effect on the organization productivity and its area, based on time, is for supplying and arranging the materials of research from second half of year 2005 to fall, 2006.

Statistical Population:

The statistical population of this research consists of all managers of Ilam municipality who deal with automation system. They are 43 people. But we must note that all personnel of Ilam municipality are 550.

Sample Size

For getting the data which is confirmed with current realities, this project is done as consensus and cares about the managers' opinion instead of sampling the addressed population because of limited number of managers.

Data Collection Procedure

There are two methods for collecting information date with respect to research nature library inquiry studies are used in supplying and theoretical compiling in library inquiry method Questionnaires are used to collect the requisite data.

Parts of Questionnaire

Questionnaire has two parts: the first part assesses (studies) demographic characteristics of respondents. The second part has 31 questions. 15 questions of them are related to assessing the effect of implementation of M.I.S on organization efficiency. The next 16 questions assess the effect of implementation of M.I.S on organization effectiveness. The questionnaires are as close -ended question and have five -choices answers (very low to very high) and are designed by likert scale.

Validity and Reliability of Questionnaire

Since there is no way to use the standard tests to evaluate the validity of questions, it is better to use specialists' opinion to evaluate the validity of questions and to have conformity with the society's culture and to limit it to evaluating the content of questions. The experts' view is positive about the content validity of questions. For final testing, first the questionnaire is given to 11 respondents, the calculated amount is 0.98. At the next step, after giving all questionnaires, the fixed index of Chorobach α is calculated and this is 0.995 and shows that the questionnaire has the requisite fixed index.

The Statistical Methods of Analyzing Data

The analyzing method, based on the research nature, is descriptive. Each of the questions and under study subjects, using the descriptive statistical methods like frequency distribution tables, frequency percentage, graph drawing, are separately analyzed. In addition, because the questionnaire is designed by likert

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method, the deviational and central tendency indices (including average, medial, and standard deviation) are calculated.

DISCUSSION AND CONCLUSIONS

The Conclusions are Studied in Three Parts with Regard to the Questionnaire Structure

Analyzing the results of statistical population characteristics (Respondents):

The results show that 88.4% of respondents are male and the rest are female. This is all because of the organization's attention to male managers.

The results show that the majority of respondents (53.5%) have B.A degree, and the lowest rate (7%) have diploma. the reason for such a percentage is organization's attention to educated forced (93%) to assign to higher posts.

Analyzing the Results of the Effect of Implementation of M.I.S on Organization Efficiency

The results show that 16.3% of respondents choose average, 39.5% choose high, 18.6% choose very high believe that the implementation of M.I.S increases the speed of information processing, and this is because of paying more and more attention of organization to the essence of using computer and administrative automation.

The results show that 18.6% of respondents choose average, 32.6% choose high, 34.9% choose very high believe that the implementation of M.I.S decreases costs, because organization cares about the effect of using computers and decreasing costs, specially personnel costs.

The results show that 3% of respondents choose average, 39.5% choose high, 27.9% choose very high believe that implementation of M.I.S causes to more carefulness in information processing. Because organization pays attention to information feedback systems (like periodic reports, and side information) and to decreasing the human mistakes and defects.

The results show that 25.6 % of respondents choose average, 34.9 % choose high, 20.9 % choose very high believe that the implementation of M.I.S improves employees' status in doing their duties. This is because of determination of kind of job, time and how to do the job, and doer of the job after the implementation of M.I.S in the organization.

The results show that 34.9 % of respondents choose average, 32.5 % choose high, 14 % choose very high believe that the implementation of M.I.S provides the possibility to fast transporting the information, and this is because of using local network system which is consists of computer systems and using the updated and central data base of M.I.S.

The results show that 9.3% of respondents choose average, 32.6 % choose low, 5.2 % choose very low believe that the implementation of M.I.S makes the supplying and processing information disharmonious. Whereas, 4.7 % of respondents choose high, 2.3 % choose very high believe that the implementation of M.I.S leads to disharmony in supplying and processing information. Because organization use a set of completely clear and identified information for information processing.

The results show that 16.3 % of respondents choose average, 30.2 % choose high, 46.5 % choose very high believe that the implementation of M.I.S helps to find the employees' problems. Because of organization's attention to this point: accurate and precise information processing and showing the possible mistakes and defects of human which were not entirely clear before.

The results show that 28 % of respondents choose average, 28 % choose high, 16 % choose very high believe that the implementation of M.I.S provides the possibility to meet the employees' problems. This is because of organization's attention to this point that if the possible problems are found by this system, there will be the possibility to meet them by cooperation of technical counseling section.

The results show that 23.3 % of respondents choose average, 25.6 % choose high, 27.9 % choose very high believe that the implementation of M.I.S warns to some employees who do their job carelessly. And this is because of an online alarming system, and reporting of mistakes.

The results show that 7 % of respondents choose average, 23.3 % choose low, 65.1 % choose very low believe that the implementation of M.I.S makes the employees to be careless in doing their duties.

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Whereas, only 2.3 % of respondents choose high, 2.3 % choose very high believe that the implementation of M.I.S makes them to be careless. This is all because of using the information feedback and online alarming system, and reporting mistakes and defects in order to decrease employees' carelessness.

The results show that 20.9 % of respondents choose average, 30.3 % choose high, 25.6 % choose very high believe that the implementation of M.I.S makes possible distinguishing successful and unsuccessful employees. This is because of using the information feedback related to hourly, daily, monthly work. Mistakes and delays in doing duties for distinguishing them based on success.

The results show that 28 % of respondents choose average, 28 % choose high, 30 % choose very high believe that the implementation of M.I.S causes equality in information collecting and processing. This is because of using some special application forms which contain some clear information for processing information.

The results show that 23.3% choose average, 30.2 % choose high, 34.9 % choose very high believe that the implementation of M.I.S prevents from re-doing and re-collecting information and this is because of saving required data and information for processing in data base of M.I.S.

The results show that 25.6 % of respondents choose average, 30.2 % choose high, 37.2 % choose very high believe that the implementation of M.I.S prevents from mistakes in collecting information. This is because of using some special determined application forms for collecting information, using information feedback system, online alarming system and reporting mistakes.

Analyzing the Results of Role of Implementation of M.I.S in Organization Effectiveness

The results show that 23.3 % of respondents choose average, 30.2 % choose high, 20.9 % choose very high believe that the implementation of M.I.S increases the possibility to assign competent to higher posts, because of organization's attention to the profession of human factors which have effect on productivity and raising the employees who are chosen by system.

The results show that 23.3 % of respondents choose average, 30.2 % choose high, 18.6 % choose very high believe that the implementation of M.I.S makes possible allocating rewards and punishments for successful and unsuccessful employees, because of organization's attention to encouragement factor of human factors which have effect on productivity.

The results show that 18.6 % of respondents choose average, 20.9 % choose low, 55.8 % choose very low believe that the implementation of M.I.S causes weakness of employees' working morale. Whereas, only 2.3 % of respondents choose high, 2.3 % choose very high believe this fact.

The results show that 18.6 % of respondents choose average, 30.2 % choose high, 46.5 % choose very high believe that the implementation of M.I.S increases the employees' motive to do their job. Because organization pays attention to motivation factor of human factors which has effect on productivity.

The results show that 18.6 % of respondents choose average, 27.9 % choose low, 48.8 % choose very low, 2.3 % choose high, 2.3 % choose very high believe that the implementation of M.I.S decreases the creativity of employees. This is because of organization's attention to human factors like profession, encouragement, and motivation which increase the creativity of employees and have effect on productivity.

The results show that 18.6 % of respondents choose average, 20.9 % choose low, 53.5 % choose very low believe that the implementation of M.I.S decreases the employees' adaptation to new conditions and situations. Whereas, only 2.3 of respondents choose high, 2.3 % choose very high believe this fact. Though, organization's attention to dependence factor which have effect on productivity increases employees' adaptation to new conditions and situations.

The results show that 14 % of respondents choose average, 37.2 % choose high, 32.6 % choose very high believe that the implementation of M.I.S provides the possibility to job satisfaction, because of organization's attention to factors such as rewards and punishments, motivation, profession, good salary and advantages, educative courses and other factors which have effect on productivity.

The results show that 18.6 % of respondents choose average, 34.9% choose high, 27.9 % choose very high believe that the implementation of M.I.S provides the possibility to participation of employees in

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decision-making and management of organization. Because of organization's attention to employees-management relation factors which have effect on productivity in order to improve the decision-making process.

The results show that 18.6 % of respondents choose average, 30.2 % choose low, 44.2 % choose very low, 18.6 % choose high, 2.3 % choose very high believe that the implementation of M.I.S increases doubts and mistrust of managers regarding decision-making. This is because of Organization's attention to factors like statistics, information, research and development which are effective managerial factors on productivity and increase the managers' sureness for making decision.

The results show that 30.2 % of respondents choose average, 27.9 % choose high, 18.6 % choose very high believe that the implementation of M.I.S decreases the amount of command sections and consequently decreases the amount of medial managers which is as the result of Organization's attention to: 1) Organizing factors-one of the managerial factors which have effect on productivity; 2) Using information system in order to facilitate the fast, low cost, accurate, precise communicating, collecting and analyzing information; 3) Harmony, control, and effectiveness of organization's activities; 4) Decreasing command sections and medial managers who do some works like collecting, analyzing and interpreting data for senior executive managers.

The results show that 25.6 % of respondents choose average, 34.9 % choose high, 27.9 % choose very high believe that the implementation of M.I.S reinforces communication and harmony among managers which is as the result of Organization's attention to factor of improvement of inter-organization relations which have effect on productivity and attention to reinforcement of relations among managers for reinforcing the requisite harmony.

The results show that 27.9 % of respondents choose average, 32.6 % choose high, 23.3 % choose very high believe that the implementation of M.I.S improves the quality and quantity of information, Because of Organization's attention to this point that productivity has not only emphasized the output quality, but also it has emphasized the output quantity and this improves the decision-making process.

The results show that 37.2 % of respondents choose average, 30.2 % choose high, 25.6 % choose very high believe that the implementation of M.I.S limpid and clears the employees' performance course, Because of Organization's attention to improvement of interactions with exclusive environment (which is organization) for increasing productivity.

The results show that 34.9 % of respondents choose average, 25.6 % choose high, 18.5 % choose very high believe that the implementation of M.I.S provides the possibility to improve the management and control of organization (Ilam municipality), operations and actions. Because Organization pays attention to the role of information in improving the process, decreasing defects, increasing carefulness, empowering management and adaptation, controlling operations which were done and managed activities by using the information feedback system.

The results show that 37.2 % of respondents choose average, 27.9 % choose high, 11.6 % choose very high believe that the implementation of M.I.S provides the possibility to more effective focus on operations and objectives of organization, and this is Because of Organization's attention to effective control system in order to accomplish and do the operations to proper use of resources, and it's attention to the role of information and management to fulfill the general objectives and plans.

The results show that 30.2 % of respondents choose average, 27.9 % choose high, 11.6 % choose very high believe that the implementation of M.I.S provides the possibility to effective use and exploitation of environmental conditions (social-economical conditions, technological achievements), and this is Because of using modern technology, automation system, and applying the technical knowledge and modern equipment, using infrastructural information facilities and regulations for decreasing costs and increasing productivity.

Recommendation

The following suggestions to increase organization productivity, with respect to the related studies are presented.

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Presenting specialized and explanatory education to managers and employees in relation to M.I.S and IT which increases their level of knowledge and consequently makes optimal use of this system and increase organization (Ilam municipality) productivity.

It is suggested to provide the software and hardware facilities for fast transportation of information and using M.I.S.

It is suggested to equalize the method of collecting and processing of information by designing standard and more precise application forms in order to prevent from re-doing and making mistakes.

It is suggested to declare the defects, problems and how to solve them which are recognized by system to employees.

It is suggested to introduce successful and unsuccessful employees and to provide emergence of creativity and job satisfaction by executing and using the system of encouragement and punishment.

It is suggested to employ successful, skillful, professional forces to do high jobs.

Because of decreasing the command sections after establishing M.I.S, it is suggested to make good decision in order change the organization to a horizontal organization.

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