

Investigating the relationship between management information system and empowering employees: A Case Study of employees in Agriculture Bank

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Abstract

Empowering employees is one of the effective techniques to increase employees' efficiency and optimal use of their personal and collective abilities in line with organization goals. In this way, the purpose of this study is to investigate the relationship between management information system and empowering employees in Agricultural Bank. The statistical population of this study includes all the employees of Agricultural bank branches in East-Azerbaijan province, who are 235. Using Kukran formula sample size was 146. This research is applied study regarding purpose and is descriptive - survey study concerning data collection method. To gather data, the researcher-made Empowerment questionnaire (Vattern and Cameroon) and management information system questionnaire were used. To analyze data, Pearson correlation coefficient and linear regression were used. Results showed that there is a significant positive relationship between management information system and empowerment dimensions.

Keywords: Management information system, empowering employees, Agricultural Bank

Introduction

Nowadays, information and information technology has affected various aspects of political, social, cultural and economic life of individuals and organizations that should not be neglected easily. The impact of information and information technology can be studied both in terms of golden opportunities creation and organizational challenges. No doubt, globalization of economy culture and many modern developments is inconceivable without information technologies. The importance of information and access to it, have changed advanced and industrial communities to an information community and their economy to a knowledge- based and information service-based economy. Management Information System is a comprehensive, integrated, computer-driven, machine-user system that its functional results are to support the organization decisions. Management information system of an organization is not distinct or separated from other information systems, but it provides a general framework that other information systems are corresponded with. State banks including Agricultural Bank should create value and meet the needs of bank customers by a prospective approach and the use of competitive weapons such as innovation and new information technologies in banking. Therefore, there is a necessity for this industry to take advantage of innovations (e-banking) in order to gain a competitive advantage, be present in the market and increase market and customer share. To be stable in a world which experience new nature and quality every time requires the optimal use of human resources in order to create value for beneficiaries and gain competitive advantage. Human force should be considered as the most important asset of an organization which has a key and important role in achieving organizational goals. Nowadays organizations spend high costs to attract and retain human resources in order to not fall behind other rivals in competition area. Nowadays, due to the competition between the

organizations and companies in achieving greater benefits, dominance on existing resources is very important. If organizations have the best technology and use the best facilities, but do not have efficient and expert human force or the ability to use existing forces correctly or efficiently, they will not be able to affect environment and to be successful in competition area. Human force has this ability to process other sources and create goods and services that the organization has been established for them. Many organizations are interested to implement the process of empowering employees since they believe that empowered employees can be more effective in achieving organization goals.

Empowerment refers to a process by which manager helps employees acquire the ability to make decisions independently. This process not only impacts on individuals' performance but also on their personality. Empowered individuals not only take advantage of the opportunities of performing some affairs, but also a change happens in their thoughts that are different from their thinking before empowerment. Empowerment is not just to give power to individuals, they may have power and also be empowered.

Management Information System

A management information system (MIS) is a system that has the responsibility to control and construct information from the environment and business operations within the organization, in a way that to prepare the required information for managers' decision making, planning and monitoring through data selection and organization (Murdick & Munson, 1986).

Management information system is an integrated system which is prepared to support the planning, control and operation of an organization. This system creates informational support by providing past, present and future information about the operations within organization and the awareness outside of the organization, operations, management and decision-making in the organization (Senn, 2004).

Management information system is an organized mechanism that delivers the proper information to managers timely and allows them to make quick and accurate decisions. The ultimate goal of these systems is to collect, analyze and link all the past and present information of the organization and other related organizations in a centralized database with a quick access to managers. In information systems it is recognized that to whom a or who is depended on her/him and when, how or by what means information should be provided and transferred (Ghazi Zadeh & Syed Zia Eddin, 2008).

In fact, an information system is a system that takes raw data as input and produces outputs as operational data and management reports after processing those (Gordon et al., 2004). An information system consists of formal and informal systems that provide the old and present information and information related to future plans as oral and written in correspondence with internal operations of the organization and its environment. Then due to the information provided to the appropriate organizational framework, it supports managers, employees, suppliers, customers and key components of the environment in decision making (Kareghari & KhademiZare, 2005).

The subsets of the MIS system are: human force management information systems, financial and accounting management information systems, production management information systems and marketing and sales information systems (that is based on mutual and shared databases). MIS managers should be aware of the real world and existing systems within organizations in order to play an effective role; therefore they should have correct information. One of the important roles of MIS manager is knowledge and interpretation of environmental and external factors of organization. MIS managers should be aware of the existing systems value and should know the role and information of available manual systems. In practice MIS manager reports to executive vice or

senior vice for planning and controlling the company and in several companies, MIS directory is created that submits his report to the top management directly (Momeni, 1993).

The advantages and applications of information systems

Providing more and better goods and services and attracting more customers

- Innovation in products
- Increasing efficiency and effectiveness (productivity)
- Increasing ability to compete with competitors
- Improving communication
- Promoting planning and control quality
- Improving decision making
- Removing information powers
- Increasing the capacity of gathering, processing and focusing information for globalization.

The positive effects on management and organizations' administration (Ghazi Zadeh & Syed Zia Eddin, 2008).

The major functions of management information system include operational support, decision support, strategic support, and monitoring the efficiency

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Empowering employees

Empowerment refers to the process by which managers help employees acquire the ability to make decisions independently. This process not only impacts on individuals' performance but also on their personality. The most important concept of empowerment is to entrust to the lowest levels of the organization. Decision-making possess should have a high degree of decentralization and the individuals or working groups should also be responsible for an integral part of business processes (Abtahi & Absy, 2007). Empowerment means that it is expected of every individual to find new ways of embracing his or her qualification (Blanchard & Randolph, 2003). Empowerment for Bowen and Lawler (1992) is employees' participation in four organizational factors: Information, reward, decision-making power and knowledge. Shuvul and et al. (1993) consider empowerment as delegating employees to make good decisions without verifying them by upper authorities. Blanchard et al. (1996) consider empowerment as sharing information, forming groups and designing appropriate organizational structures by employees. In fact, empowerment is transferring official authorities or legal power to employees (Argyris & May-June, 1998).

Empowerment is a developmental process; it is a process that enhances the ability of employees to solve problems, promotes their political and social insight and enables them to identify environmental factors and subjugate them (Cartwrith Roger, 2002). Empowerments giving power and decision-making to employees in order to enhance their performance and play a useful role in the organization (Erstad Margaret, 1997).

Researchers and experts beyond organizational and managerial strategies and practices such as delegation of decision-making and sharing of information, look at empowerment. The researchers attribute qualities for empowered people that we can comment on their empowerment or non-

empowerment based on some indicators or features. Therefore, the empowerment nature should be considered just as it is experienced by the employee (Conger Jay et al., 1988)

The dimensions of empowerment are presented in the following five components:

Self- efficacy: it refers to the individual's perception of his ability to perform the job successfully.

Autonomy: or self-organization means having sense of choice and is synonymous with choice and independence in work

Significance: it is related to the goal and action ideals which are judged based on personal standards and ideas.

Influence: it refers to the individual's perception of how he or she can affect and change the realization of organization objectives.

Trust: it refers to the employees' confidence in that they will be behaved fairly and equally in their work environment (Blanchard & Randolph, 2003).

There is no doubt that the evolution of every community is related to the development and improvement of its human resources. This is why organization authorities focus on the development of employees by the help of those who are expert in human resources and behavioral science. One of the concepts that is introduced in correspondence with the development and promotion of human resources is the empowerment of employees (Turban et al., 2003).

Empowerment perception is defined as the individual experience of internal motivation that is based on that persons' knowing himself/herself in relation to his job role (towns , 2010).

When employees get more competence and apply that, managers' power is increased. Employees' power is increased when managers are more competent and have the ability to play new roles in an empowered organization. Empowerment is a continuous interactive process; since each individual and team that is empowered, gains authority and applies it. Individual and organizational empowerment, is achieved when employees could gain their own superior level (Geisler, 2005). Empowerment is not the division process of fixed extent of power; but it is a process through which relative power of each individual is increased and a new power is established for organization. Empowerment is imposition based on competence that should be established. This power is beyond the power that is divided or shared; this power derived from this reflection is a power that can and should be created through continuous promotion of competence and its application (Chamberlin, 1997).

Using the potential capabilities of human resources is regarded as a great advantage for any organization. In individual or personal productivity, organization uses person's potential abilities and talents for the development of organization. Therefore, to achieve the objectives of the organization, is the effective management of these valuable resources. In this way the progress, prosperity, and improvement of employees capabilities have been considered which in recent years has been the focus of scholars and experts in human resources management (Towns, 2010). Lee Chong Chung, Shan Xia Hu of China & Lynn Mann (2010) showed that job satisfaction has a direct effect on organizational commitment and has a statistically significant impact on organizational commitment through organizational empowerment and psychological empowerment. Also they showed that those employees who are satisfied with their jobs and are committed to the organization for which they work, perform better than others. Raufi & Janatiin in their study found that job satisfaction is a combination of psychological, physical and environmental factors which cause a person to say "I am satisfied with my job (Abu, 2009). Also in another study it was found that employees' commitment may have mutual relationship with organizational, job, work, and personal factors and job involvement may be related to organizational commitment (Eskandari, 1999). In a research that was done by Akpra and Vinder (2008) the results suggested that there was a significant

relationship between perceived equity, organizational commitment and job satisfaction. In other study was found positive and significant relationship between organizational commitment and job satisfaction (Estrone, 1996). In addition, in another study it was concluded that employees' perceptions of organizational conditions (salary, work and work environment, respect for the institutional and procedural justice) are different and the types of perception have an effect on organizational commitment (Parniyan, 1999).

Research hypotheses

The main hypotheses: there is a significant positive relationship between management information systems and employees' empowerment in the Agricultural Bank of East-Azerbaijan province.

Alternative hypothesis: there is a significant positive relationship between management information systems and employees' empowerment dimensions (employees' competence, autonomy, significance, perceived effectiveness and their trust).

Materials and Methods

This research is applied study regarding purpose and is descriptive - survey study concerning data collection method. The statistical population of this study includes managers, directors, officials and a group of agricultural experts in all branches of the Agricultural Bank of East Azerbaijan province, who are 235 people in 84 branches. Among them, 146 were selected. The main instrument of data collection is a questionnaire. To measure the questionnaire reliability Cronbach's alpha test was used after data collection. The obtained alpha was greater than 7.0, which supported the reliability of questionnaire.

Results

The main hypothesis: there is a significant positive correlation between the management information systems and the empowerment of employees in the Agricultural Bank of East-Azerbaijan province.

Table 1: Correlation coefficient between management information systems and the empowerment of employees

Significance level	Correlation coefficient
0/000	0/711

As the correlation coefficients is 0.71, it can be stated that there is a relatively strong correlation or relationship between management information systems and empowerment. In other words, the more powerful management information systems, the higher employees' empowerment will be.

Regression test

Table 2: Table of results for the main hypothesis of linear regression

Durbin Watson	value -p	F	R^2	R	statistics
2/037	0/000001	$1/41 \cdot 10^4$	0/990	0/995	The obtained value

According to table 4, the value of R statistic is equal to 0.995, which is significantly high and R^2 is equal to .99, which indicates that about 99% of the variations in dependent variable i.e. the extent of employees' empowerment in Agricultural Bank is related to the obtained model.

The obtained P-value for this test is equal to 0.000001 which is less than the value of significance level $\alpha = 0/05$. Therefore, we can certainly state that the obtained model is strongly significant and there is a significant linear relationship between the management information systems and the extent of employees' empowerment in the Agricultural Bank employee empowerment. In other words, the empowerment of employees in Agricultural Bank is affected by the management information systems.

Durbin Watson statistic indicates the independence of residuals which is very important for the validity of regression model, if the value of this statistic is between 5.1 and 5.2, the result is the independent of residuals. Here also by considering the obtained value i.e. 037.2, we conclude independence of residuals.

Table 3: Regression coefficients and t-test for the main hypothesis

P-value	t	standard	Standard deviation	β	Statistic Independent variable
0/001	118/731	0/995	0/008	1/005	MIS

Table 3 shows the results of test and the values of regression coefficient. The value obtained for the test shows the significance of regression coefficient, since it is 0.001 which is much less than the 0.05. The obtain regression coefficient for this model is equal to 0.995.

Table 4: Pearson correlation coefficient of empowerment components with management information system

MIS	Trust	influence	significance	autonomy	competence	component
					1	competence
				1	**790.	autonomy
			1	**787.	**775.	significance
		1	**645.	**598.	**674.	influence
	1	**730.	**650.	**675.	**626.	trust
1	**790.	**326.	**346.	**689.	**549.	MIS

The alternative hypothesis: there is a significant positive relationship between management information systems and employees' empowerment dimensions (employees' competence, autonomy, significance, perceived effectiveness and their trust). The empowerment of management information systems and personnel (employees competency, employees felt autonomy, meaningfulness, perceived effectiveness and trust).

The results of Table 4 indicate that there is significant relationship between all dimensions of empowerment and the management information system in the significance level of 0.05. It means that an appropriate management information system has a positive impact on all dimensions of empowerment.

Table 5: The results of linear regression test for the alternative hypothesis

Durbin Watson	p-value	F	R ²	R	statistic
2/227	0/001	1/825*10 ⁴	0/992	0/996	competence
2/227	0/001	1/495*10 ⁴	0/991	0/995	autonomy
1/949	0/001	1/613*10 ⁴	0/991	0/996	significance
2/227	0/001	1/825*10 ⁴	0/992	0/996	influence
2/037	0/001	1/410*10 ⁴	0/990	0/995	trust

The obtained values for regression coefficient in the relationship between management information systems and empowerment dimensions of bank employees is a relatively positive value, meaning that there is a direct and mean relationship between management information systems and employees' empowerment in the Agricultural Bank, which shows that employees will be more empowered when there is an appropriate management information system in the bank.

Conclusion

In line with the current study, the conclusions revealed that management information systems have an impact on the empowerment of employees in the Agricultural Bank of East-Azerbaijan province. According to both Dorotinsky Dorotinsky (2003) and Rozner (2008) an IFMIS is an information system that tracks financial events and summarizes financial information (Hendriks, 2012).

Since all the hypotheses are supported, the significance level of Person test in all cases was less than the least significance level and in all the hypotheses regression coefficient shows that employees' empowerment and its dimension are affected by management information systems, therefore, the role of management information systems is considered very critical in organizations. As long as there is no suitable infrastructure and situation for implementing management information systems, it cannot be expected that employees to be empowered enough, because according to the current study, one of the issues which leads to the increase of employees' competence, autonomy, significance, influence and trust is the availability of suitable management information systems. The management information systems that are applied should use all of the capabilities and specialties of employees, increase their ability for success as well as their knowledge and specialty which ultimately lead to the increase of their competence.

A suitable management information system for empowering employees, shares information among employees properly, does not destroys the trust between employees, higher authorities and lower authorities and creates the possibility of entrusting their power and responsibilities to others. Management information systems should be designed in a way employees feel their activities in organization is systematic and create the situation for innovation and creativity for them.

References

- Abtahi, S. H. & Absy, S. (2007). Empowering employees, Karaj, Institute of Research and Management Education, 1st Edition.
- Abu, H. (2009). Investigates the relationship between equality perceptions with job satisfaction and organizational commitment among Education and Developmental center teachers of Savad Kooh city, MA Thesis , Islamic Azad University of Firoozkooh branch.
- Argyris, C., May-June, B. (1998). *Empowerment the Emperor's New Clothes*, Harvard Business Review.
- Blanchard K H, Carlos J P, & Randolph A. (2003). Empowerment take more than one minute. Barrett-Koehler. Sanfrancisco.
- Cartwrith, R. (2002). *Empowerment*, Easton publishing.
- Chamberlin J, (1997). A working definition of empowerment, *Psychiatric Rehabilitation Journal*, 20 (4), 43-46.
- Conger, J. A, Rabindra., & N Kanungo.(1988). The Empowerment process: Integrating theory and practice. *Academy of Management Review*. 13(3), 471-482.
- Dorotinsky, B.(2003). Implementing financial management information system projects: The World Bank experience, viewed 06 April 2011, from <http://blog-pfm.imf.org/AIST2/Dorotinsky.ppt>.
- Erstad, M. (1997). Empowerment & Organizational Change. *International Journal of Contemporary Hospitality Management*: MCB.University Press.
- Eskandari, B., Farhanghi, A., Eskandari , M. (2003). Introducing the empowerment in the management and its patterns, *Journal of Management Studies*, 40 (39), 99-123.
- Estrone, H. (1996). Investigating the attitudes of teachers toward areas of negative perceived inequality and its consequences. MA Thesis, University of Shiraz.
- Geisler, D. (2005). The Next Level in Employee Empowerment Quality Progress, *Research Library Core*. 38 (6), 48-52.
- Ghazi zadeh, F, & Syed Zia Eddin, (2008), *Information and Communication Technology and Foundations of Information Systems* (Volume 1), Tehran, Publication Institute of Imam Hussain (AS),1st edition.
- Gordon R. S., & Gordon R. J. (2004). *Information systems A management Approach*, John Willey and Son, INC.
- Hendriks, C.J. (2012). Integrated financial management information systems: Guidelines for effective implementation by the public sector of South Africa, *SA Journal of Information Management* 14(1), and Art. #529, 9 pages. <http://dx.doi.org/10.4102/sajim.v14i1.529>.
- Kareghari, M., & Khademi Zare, H. (2005). *ICT master plan of Tehran municipality» Tehran, capital of Iran Science and Technology University*, 1st ed.
- Momeni, H. (1993). *Management information system*, Ahliyat publications.
- Murdick, Robert G. & J.C.Munson, (1986). *Concepts and Design*, Second Edition, Prentice-Hall.
- Parniyan, A.R. (1999). The investigation of Employee perceptions and its relationship with organizational commitment Mashhad University, MA thesis, University of Mashhad.
- Senn,J. (2004). *Information Technology; Principles, Practices, Opportunities*, Pearson Education, NC.
- Towns, P.(2010). Empowerment, coercive persuasion and organizational learning : Do they connect learning organization , 6.
- Turban, E., Fraim, K., R. Potter, & Richard E. (2003). *Introduction to information Technology*, John Wiley and sons/INC.