

Research Article

INVESTIGATION COMPETENCY EFFECTS OF INFORMATION SYSTEMS ON MANAGEMENT INFORMATION SYSTEMS (MIS) BASED ON GARNER MODEL (CASE STUDY: MELI BANKS OF BOROJEN TOWNSHIP)

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ABSTRACT

Main aim of present study is investigation of competency effects of information systems on management information system (MIS) based on Garner model (case study: Meli Banks of Borojen township). In the present study descriptive-survey method is used which is obeyed conducting of field study. Statistical population of present study is included all the staff of Meli Bank in Borojen township who are 385 people. But only the research has been done for 108 people. Data collection tool for the present study is questionnaire. In order to determining validation of present study's questionnaire Cronbach's alpha coefficient has been used after the filling of questionnaire. In the present study random sampling method is used. For analyzing data the SPSS software is used and the results present in the conclusion part.

Keywords: *Competency, Garner Model, Management Information System (MIS)*

INTRODUCTION

Whatever is a part of company capital in view of management is on time and reliable related information which are guidelines for managers to make an optimum decision. Information is an ability factor for managers, so capable manager is a person who has the correct and accurate information about environment phenomenon and uses such tool in order to improvement organization's goals (Sarafi and Asqari, 2005). As regards decision making is the most important duty of managers and determiner needs to precise, correct and on time information in a proper time, so existence of efficient management information systems is necessary in an organization. But this issue should be considering that entity and performance of MIS does not mean reduction of management effectiveness (Rahnemood, 2005). In these conditions not only management and control will not decrease, but also it can see everywhere. Basic difference is where control can be everywhere by using technology. Thus, control and management is happened but its mechanism has not changed. In addition to this management method and management of organization affects on information systems of organization and gives effect (Momayez, 2008).

Competency

Competency concept was introduced by White for the first time. With hypothesis of a relation between cognitive competency and motivational tendencies, white has defined competency as "effective interaction between a person and environment" which besides the competency it is a competency motivation which is called achieved capacity. Competency approach in a company environment was beginning in 1970 and then it is developing and using immediately. Competency concept is in the heart of human resources which is based on integration activities of human resource. As a result, it develops comprehensive approach towards people management in organizations (Ross, 1980).

David McClelland an outstanding physiologist of Harvard became famous because of introducing the idea of "competency" to human resource literature. He improved selection methods of evaluation "The US Intelligence Agency". McClelland has found in his study that competency such as interpersonal sensitivity, positive considerations of intercultural and management skills are different between prime and normal information agents (Momeni, 1993).

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McClelland followed this approach and he has done examinations in order to prediction competency as a replacing for intelligence approaches and personal properties to evaluation the approach. McClelland defined competency as a property which determines human performance. “Competency is a property which determines the performance”, he said. Since the goal is workplace performance, researchers use competency or job competency lexis which pointed to individual competency and help to job success. Job competency is a specific property of person which is lead to higher and effective performance in a job (Mac, 2005).

Also Boyatzis said: “Competency is properties which has related to higher and effective performance in a job. It means having a property is lead to effective and superior approach in a job. An experimental relation of property is an independent variable and job performance is a dependent performance (Quafaryan). Competency concept has determined differently by authors. For instance, Sparrow (1982) has defined competency as a memes which is related to job performance and it is distinctive prime people from normal ones. Marley (1998) said: “competencies are human abilities which can measure and need to effective performance job.” Also Jackson and Schuler have defined competency as skills, knowledge, abilities and other properties which a person needs for effective performance in the job. Most of the researchers have known mentioned properties as competency and it is a required subject of human resource experts (Mostajeran, 1999).

Competency is a process that enables manager to increasing global knowledge as a systematic which had done strategic attempts and necessary plans in order to controlling works. Competency causes to managers do their work as a group in regards to achieving organizational goals. They can find the proper people with appropriate skills in a determined time with this method (Fitzgerald and Refits, 1998).

Results summarizing of conducted studies around competency has shown competency in different fields with determining functions and indexes has measured. Competency effects have dividable structure and relation on information system and management information system. In the present study has considered to competency as professional dimension and in the principle competency is a collection of skills, abilities and individual properties which has relation with success performance in a job (Yazdani, 2010). In this project desired approach to investigation competency is evaluation of central approach. Central evaluation is the most effective tools to investigation people in the group positions in order to choosing and developing. Central evaluation lexis is not mentions to the real place; on the contrary it shows an approach which is trying to gives necessary information from various sources such as: the person, people who are related in a work place and professional assessment. Also they should give information from multiple methods like: interview, questionnaire, teamwork, case study analysis of data, role playing, simulated work place and etc. competency models have use as a tool which link strategies to organization and individual approach (Sarafi, 2004).

Garner Model

In this part total classified of competency information system has considered in five modes of Garner model. By using this classification, structured model can considered for axial competency field.

In Garner model five key competencies was identified (Mousa and Adli, 2009) which these duties are included:

1. Information technology leadership
2. Architecture development
3. Business promoting
4. Advancement of technology
5. Seller management

Kano Model

Investigation of management competency functions in Kano model is a management or leadership competency which includes collection of skills, properties and individual behavior of organizations managers and leaderships (Hafeznia, 2005).

Leadership Competency Prioritize in Six Modes of Kano Model

Quality modes are included:

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1. Obligatory
2. Functional
3. Exiting
4. Apathetic
5. Reverse
6. Questionable

In feedback control systems a section of output system back to system as input. System may be designed so that feedback can help the system to achieving its goals.

Most of the management and accounting systems design as a feedback are created a control for destinations. Responsible reporting systems make for feedback managers in order to their performance of organizational goals. Therefore, managers can make decisions which arrange the inputs process and help them to achieve the system goals. Ultra systems may have different kinds of subsystems (Jasbi, 1990). For an example a half-closed system may have the subsystem which is open system, half-closed or feedback controller system.

According to the Garner model has introduced information technology leadership, architecture development, business promoting, technology development and selling management as five key factors in competency for effecting on information systems. These factors due to the intense competition and technology changing have forced to organizations and various methods in increasing human resource efficiency. Now it is expected to human resource of organizations have more effects in productions and services which are presenting. As a result, it is clear that mentioned factors by Garner have analysis competency and this is the same factor for competency to be important in the competition environment. Human resource environment of Iran and in the more glimpses, banks are not affectless of these changing and their goals are changing with global transformations (Chang and Thraenon, 2004). Acceptance and immediate development of axial competency approach and using it in staff development planning is advantages of the Garner model more than everything else. Competencies have different benefits for organizations and managers in different levels. Organizations use competency because of various reasons such as: transfer valuable behaviors and organizational culture, efficiency performance for all staffs, effectiveness organizations and management of them, emphasis on people capacity as gain a competitive advantage method and strengthening teamwork.

Competency of information systems depend on comprehensiveness and integrations of them with other organization activities. Since information system is effective that be useful for managers and other staffs. Managers should get the proper information in a required time and they should be sure the result of information is update. Information like other organization resource must be replace with new information resource before that become obsolete. Raw data should change to useable information because related people can use them in proper time and form with proper sequence. Also information which is expired should not be in the process. System should be familiar with user and power monitoring exists in the system to providing safety (Agut *et al.*, 2003).

Most important factors which should be in the information system in order to desired competency are included:

1. Organization operations and activities
2. Processing method
3. Management decision
4. Reporting method
5. Designing method
6. Data bases
7. Communication technology and control principles

Inform system should analysis in the way of works which happen in the organization. Most of the information system inputs and outputs create by operation units of organization and most of the information system outputs are used for administer of mentioned operation. So that, in order to

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information system competency we should arrange them in line with goals, activities, duties and operations of organization (Armstrong, 1995).

Organization activities have management, financial and operation dimension and they are reflecting in the information system. Processing manner of these activities should be determined. Data which are used for decision must be coordinate with kind of decisions which are supposed to making. Besides, since data are more beneficial that personal manner and style of manager is considered. For instance manager of the unit prefer monthly and great reports to detailed and numerous reports, whereas another manager prefer to give detailed and comprehensive reports (Grzeda, 2006).

Evaluation of Competency Effects of Information Systems on Management Information Systems based on Garner Model

Garner group said: “changing professional centralized and decentralized activities in excellence centers of job causes to appear key competency in information systems duty.” They are included:

1. Information technology leadership
2. Architecture development
3. Business promoting
4. Technology progress
5. Selling management

According to the raised issues, we are concluded the goal of present study. Organization and institute managers of our country are following expended aims as using integrated information systems like management information system. Competency effects of information systems on management information system according to the mentioned issues are as follows:

- Doing primary and repeated activities of organization in the smart way and easiness in operation works.
- Using internal controls of primary activities in a smart way.
- Quick access to classified information for making decision.
- Making continued and on time reporting fields in an organization and creating cultural, disciplinary and economic background.
- Saving in data progress.
- Easiness in data gathering and saving.
- Prevention of spending repetitive times in order to producing data about a unique subject.
- Increasing efficiency and performance in an organization.
- Help to the inexperienced users.

Lee and Yu (2012) have conducted a study under the title of “success model of project management information system in construction”. Results of mentioned study have shown project management information system can act as a basis for successful in contracts (Luthans, 1998).

Esmi *et al.*, (2011) have conducted a study under the title of “management information system (MIS) role and decision support system (DDS) for process of manager’s decision” and have investigated on MIS role and DDS role in manager’s decision process. Results of mentioned study have shown that DDS can expand support of itself with decision process and on the other hand, it has greater role in solving MIS problems.

Namani (2010) has conducted a study under the title of “information system role in management decision and theory methods”. He is investigated information system role to helping managers in order to make better decision in an organization. Results of mentioned study have shown that information systems causes to unreliability of managers in decision making process. On the other hand, it causes to improvement manager’s decision making process (McLeod, 1988).

RashidiRad *et al.*, (2008) have conducted a study under the title of “key issues in field of management information system of Iran organizations and its efficiency factors” and he is identified variables and effective factors on field of management information systems. Results of mentioned study have shown most major effective variables on key issues of management information systems are included

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organization's maturity level, technology, political variables, cultural and legal variables, manner of organization and size of organization.

Amid *et al.*, (2007) have conducted a study under the title of “investigation strategic planning effects of information systems in order to improvement management performance of supply chain”. They present a model for supply chain management. Presented model by researchers is called spiral model. It means that in each level the previous level is considered and will review again. Also, results have shown that design and planning of supply chain is affected by strategic planning of information system. Activities which are done in codification of strategic planning process of information systems can be a proper guide for this work.

MATERIALS AND METHODS

Methodology

In the present research according to the subject matter descriptive-survey research has been used which obeys of conduct field research, whereas, all the staff of Meli Bank in Borojen province are female and male group. So, investigation of competency effects of MIS has investigated on response rate of staffs to the subject based on Garner model. In the present study dependent variable is management information system. Independent variables in the present study are included:

1. Respondent's properties which are contained individual properties, educational level, field of study, work experience, current position and experience in fields of management and accounting. Also it is included questions about recognition rate in fields of management information systems as an information system and using rate of produced information by information system.
2. Investigation competency effects of information system are in terms of capacity, model and being on time and providing manager needs. In the present study, statistical society is all the staff of Meli Bank in Borojen province who is 358 people. But only researches have been done with 108 people. Data collection tool in the present study is questionnaire. In order to determining questionnaire validity of present study Cronbach's alpha coefficient is used after questionnaire. Also random sampling has been used and for analysis data SPSS software has been used.

RESULTS AND DISCUSSION

Findings

Analysis of information as a part of scientific methodology process is one of the primary base of each study that all the research activities are controlled by it until reach to the result. In the next part we are presenting descriptive and comprehensive studies.

Descriptive Studies

In the present study we are used five hypothesis included technology leadership, selling management, technology progress, business promoting and architecture development.

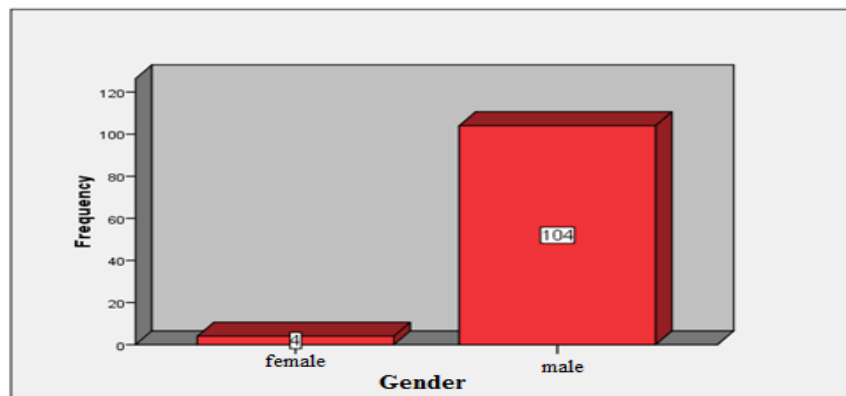


Figure 1: Gender variable distribution

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We are discussed twenty questions about these hypotheses and give out 108 questionnaires among Meli Bank staff to give their ideas about investigation competency effects of information systems on MIS. We will discuss obtained results in comprehensive findings.

Figure 1 is dedicated gender variable. According to this table 96.3% of respondents are males and rest of them are females.

Figure 2 is dedicated variable rate of work experience. According to this table lowest percentage is related to group of five years (6.5%), and highest percentage is related to group of ten to twenty years (39.8%).

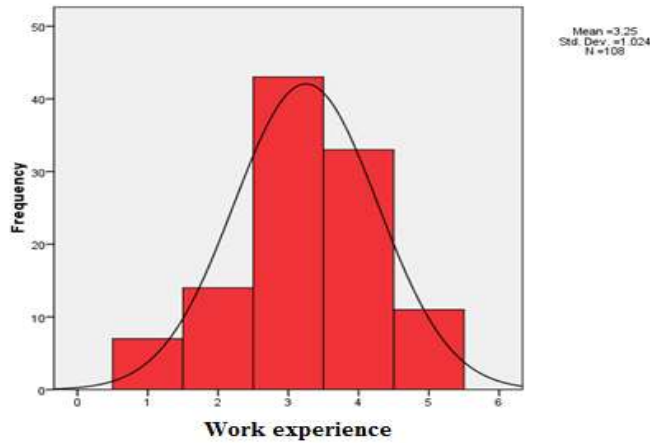


Figure 2: Work experience variable distribution

Figure 3 is dedicated academic paper. According to this table 20.4% of respondents have Diploma, 25.9% have associated degree, 51.9% have bachelor’s degree and rest of them have masters.

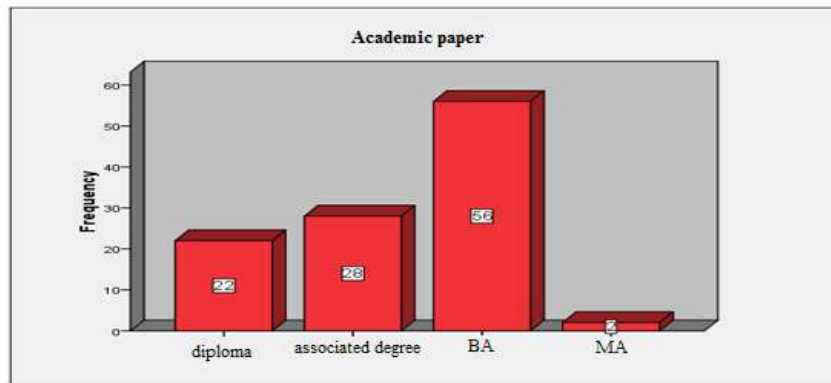


Figure 3: Variable distribution of academic paper

Comprehensive Studies

In the present study comprehensive studies is due to fourth hypotheses which is hypothesis No.4 (business promoting and MIS) with total frequency of 67.6% has most frequency in the hypotheses. Too much option in second hypotheses with frequency of 57.4% was placed in the second class. Too much option in fifth hypotheses with frequency of 53.7% was placed on third class. Too much option in the first hypotheses with frequency of 51% was placed in the fourth class and in third hypotheses with frequency of 42.6% was located in the fifth class. As a whole, all the hypotheses were acceptable.

Testing Hypotheses

First Hypotheses: It seems there is a relation between leadership, information technology and management information system (MIS) based on Garner model.

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Chi-square test

| | Question 1 | Question 2 | Question 3 | Question 4 |
|----------------|--------------------|---------------------|---------------------|---------------------|
| Chi-square | 6.167 ^a | 98.296 ^b | 56.370 ^c | 63.481 ^b |
| Freedom degree | 2 | 4 | 3 | 4 |
| Meaningful | .046 | .000 | .000 | .000 |

Comprehensive statistics

| | |
|----------------|--------|
| Number | 108 |
| Chi-square | 41.631 |
| Freedom degree | 3 |
| Meaningful | .000 |

According to the chi-square and lowest meaningful of 0.05% the first hypothesis is acceptable with chi-square of 41.631.

Second Hypotheses: It seems there is a relation between selling management of information and MIS base on Garner model.

Test statistics

| | Question 5 | Question 6 | Question 7 | Question 8 |
|----------------|---------------------|---------------------|----------------------|----------------------|
| Chi-square | 67.704 ^a | 50.667 ^b | 133.037 ^a | 133.019 ^c |
| Freedom degree | 3 | 2 | 3 | 4 |
| Meaningful | .000 | .000 | .000 | .000 |

Comprehensive statistics

| | |
|----------------|--------|
| Number | 108 |
| Chi-square | 71.502 |
| Freedom degree | 3 |
| Meaningful | .000 |

According to the chi-square 71.502 and lowest meaningful of 0.05 errors the second hypothesis is acceptable.

Third Hypothesis: It seems there is a relation between information technology progress and MIS based on Garner model.

Test statistics

| | Question 9 | Question 10 | Question 11 | Question 12 |
|----------------|---------------------|----------------------|---------------------|---------------------|
| Chi-square | 99.407 ^a | 104.500 ^a | 94.407 ^a | 93.019 ^a |
| Freedom degree | 4 | 4 | 4 | 4 |
| Meaningful | .000 | .000 | .000 | .000 |

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Comprehensive statistics

| | |
|----------------|--------|
| Number | 108 |
| Chi-square | 45.064 |
| Freedom degree | 3 |
| Meaningful | .000 |

According to the carried out test in above table with chi-square of 45.064 and lowest meaningful of 0.05 errors the third hypothesis is acceptable with a probability of ninety-five percentages.

Fourth Hypothesis: It seems according to the Garner model there is a relation between business promoting and MIS.

Test statistics

| | Question 13 | Question 14 | Question 15 | Question 16 |
|----------------|----------------------|----------------------|----------------------|---------------------|
| Chi-square | 104.222 ^a | 101.352 ^a | 163.296 ^a | 51.907 ^a |
| Freedom degree | 4 | 4 | 4 | 4 |
| Meaningful | .000 | .020 | .000 | .030 |

Comprehensive statistics

| | |
|----------------|--------|
| Number | 108 |
| Chi-square | 152.04 |
| Freedom degree | 3 |
| Meaningful | .000 |

According to the carried out test in the above table with chi-square 152.049 and lowest meaningful of 0.05 errors the fourth hypothesis is acceptable with probability of 95 percentages.

Fifth Hypothesis: It seems according to the Garner model there is a relation between architecture development and management information system.

Test statistics

| | Question 17 | Question 18 | Question 19 | Question 20 |
|----------------|----------------------|---------------------|----------------------|---------------------|
| Chi-square | 107.185 ^a | 97.185 ^a | 104.685 ^a | 89.315 ^a |
| Freedom degree | 4 | 4 | 4 | 4 |
| Meaningful | .000 | .000 | .000 | .000 |

Comprehensive statistics

| | |
|----------------|--------|
| Number | 108 |
| Chi-square | 16.254 |
| Freedom degree | 3 |
| Meaningful | .001 |

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According to the carried out test in the above table with chi-square 16.254 and lowest meaningful of 0.05 errors the fourth hypothesis with probability of 95% is acceptable.

Conclusion

Based on obtained results of research hypotheses testing, results are as follows:

- There is a relation between leadership and information technology with management information systems (MIS) based on Garner model.
- According to the Garner model there is a relation between information of selling management and MIS.
- There is relation between information technology development and MIS based on the Garner model.
- There is a relation between business promoting and management information system according to the Garner model.
- According to the Garner model there is a relation between architecture development and management information system (MIS).

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