Investigate the Relationship between Information Technology and Employees' Productivity with Mediating Role of Knowledge Management (Case study: Imam Reza Hospital of Sirjan)

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Abstract

The purpose of this study was to investigate the relationship between information technology and employees' productivity with mediating the role of knowledge management. A descriptive, quantitative, co-relational design was used. The statistic population of research consisted of all employees of Imam Reza Hospital in Sirjan. The population consisted of 250 employees. The data collection instrument included demographic questionnaire, questionnaire of information technology, employees' productivity and knowledge management. Data analysis included descriptive statistics, and structural equation by software of Lisrel. There is a significant relationship between information technology and employees' productivity with mediating role of knowledge management. According to the results, there is a significant relationship between knowledge management and productivity.

Key words: Information technology, Productivity, Knowledge Management, Sirjan

Introduction

Nowadays some issues are presented that we can't solve with past strategies. The main characteristics of today's issues is the vast amount of data and information that needs to be collected, preserved, processed, retrieved and analyzed. This property, which is considered as the creator of organizational complexities, caused a move toward modern technology, called Information Technology (IT) that helps to facilitate the work with data and information (Abzari et al., 2007). Despite the short life of IT and its rapid development, different definitions and perceptions are presented about it that through careful observation we can find some internal inconsistencies. (Sarfarazi, 2006). These definitions cover the broad range of concepts that sometimes are quite limited in the computer processing of operations and sometimes are remembered broadly as a technology that organized life is dependent on. According to Mantel (2006),information technology is to collect, store, organize, process and disseminate information including audio, image, text or numbers that is done by computer and telecommunication tools (Eshlaghi and et al., 2011).

Today, the importance of information is discussed either as an important tactical and strategic source in an organization and it has been known as a major source of value adding as well. Information has always been regarded in the business environment as a competitive advantage. But the important point is that real changes can increase the potential value of information, the organizations' ability in using of this important resource is through the application of new technology. Information technology with features like storage, processing, marketing and data transfer can assist

managers in improving the organizations' performance. On the other hand, the importance of productivity and the necessity to review it with regard to expanding of competition levels, technological complexity, and variety of tastes, lack of resources and the data transfer speed is not hidden for anyone. The impact of information technology on productivity has been discussed as the arguable major issue in the economy in the 1990s. In terms of theoretical and experimental, many studies have been conducted in developed countries and developing countries (Mahmoodzadeh, 2011). The main features of the present age, is information and turning it into knowledge. Such features will have a large impact on the social and economic institutions; if a social institution also uses it as a base it , changes their structure and rebuilds it. In fact, it can be stated that information technology has increased the ability of organizations and with knowledge and human rationalism of ideas, in order to exploit it and assign repetitive affairs and non-creative activities to machines, as well as increasing efficiency and releasing of human skills, much attention has been paid to it in recent years (Eshlaghi and et al., 2011). The aim of this study to was examine and investigate the relationship between information technology and employees' productivity with the mediating role of knowledge management.

Principal Hypothesis

There is a significant relationship between information technology and employees' productivity with mediating role of knowledge management.

Secondary Hypotheses

(1) There is a significant relationship between information technology and employees' productivity.
(2) There is a significant relationship between information technology and knowledge management.
(3) There is a significant relationship between knowledge management and employees' productivity.

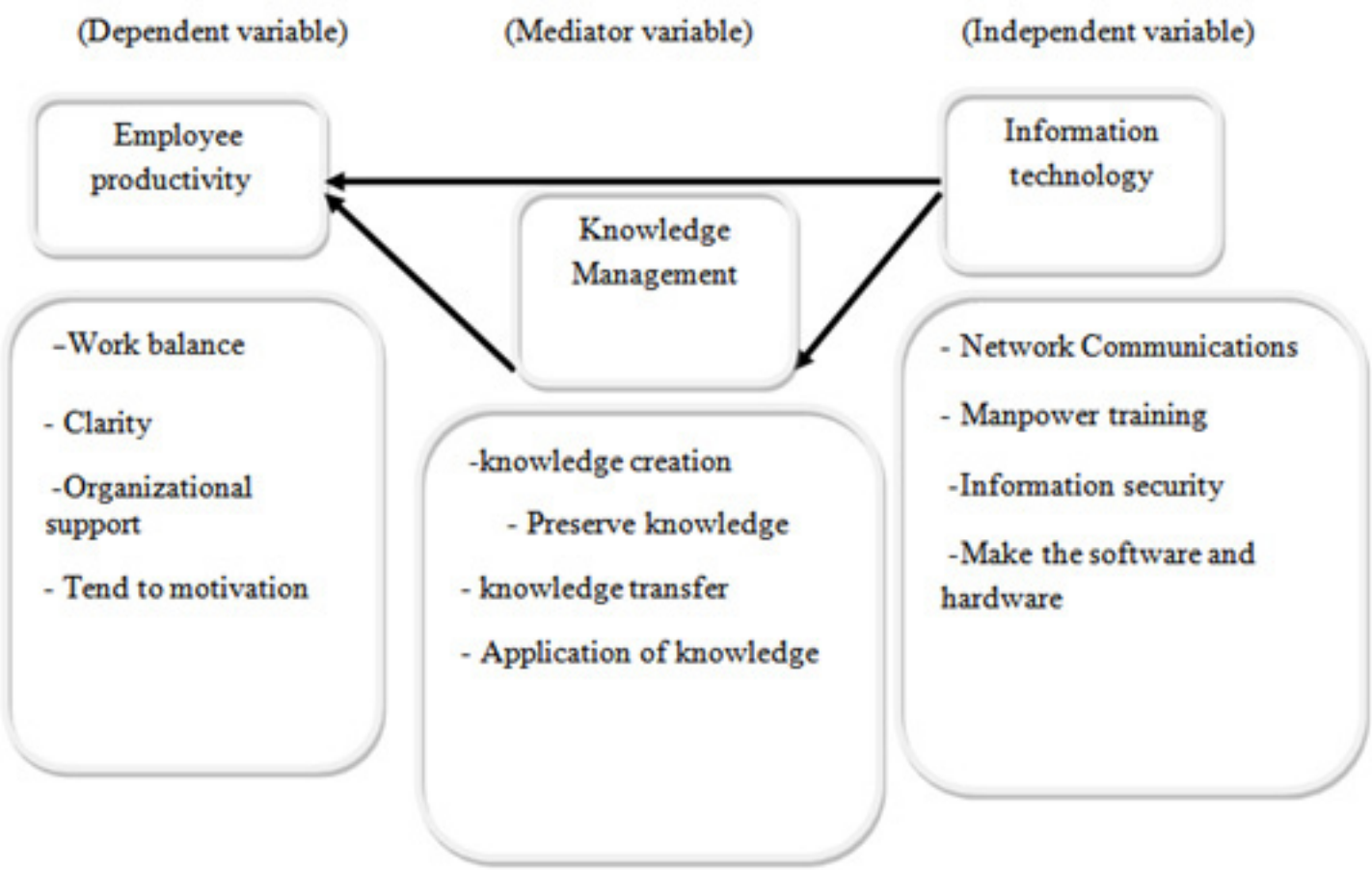
Research methods

A descriptive, quantitative, co-relational design was used. The statistic population of research consisted of all employees of Imam Reza Hospital in Sirjan. The population consisted of 250 employees. The data collection instrument i included demographic questionnaire, questionnaire of information technology, employees' productivity and knowledge management. The staff answered the same questionnaire including information technology (20 questions), employees' productivity (28 questions) and knowledge management (i=25 questions). Cronbach's alpha that was obtained from the pilot data was 0.8 for information technology, 0.86 for employees' productivity and 0.79 for knowledge management (Treadway et al., 2004; Harris & Harris, 2007). Data analysis included descriptive statistics, structural equation by software of Lisrel.

Demographics Results

Of the 250 subjects enrolled in the study, 39.7 % were male and 60.3% were female. Among respondents those aged 31 to 40 years were most frequent and least frequent in the age group were 30 and lower.

Conceptual Model



Results

Principal Hypotheses

[1] There is a significant relationship between information technology and employees' productivity with mediating role of knowledge management.

H0: There is a not a significant relationship between information technology and employees productivity with mediating role of knowledge management.
H1: There is a significant relationship between information technology and employees productivity with mediating role of knowledge management.

The results of this study show there is a significant relationship between information technology and employees' productivity with mediating role of knowledge management. Thus H0 is rejected and research hypothesis is approved. According to the results, numbers significant between IT and knowledge management is 7.23. So there is a significant relationship between information technology and knowledge management. According to the results, standard coefficient between information technology and knowledge management is 0.66 . This reflects the strong relationship between information technology and knowledge management. The results of this study show the numbers significant between employees productivity and knowledge management is 6.62 .So there is a significant relationship between productivity and knowledge management. According to the results, standard coefficient between employees productivity and knowledge management is 0.59. This reflects the strong relationship between productivity and knowledge management (Chart 1 and 2).

Chart 1: Values significant of structural equation modeling

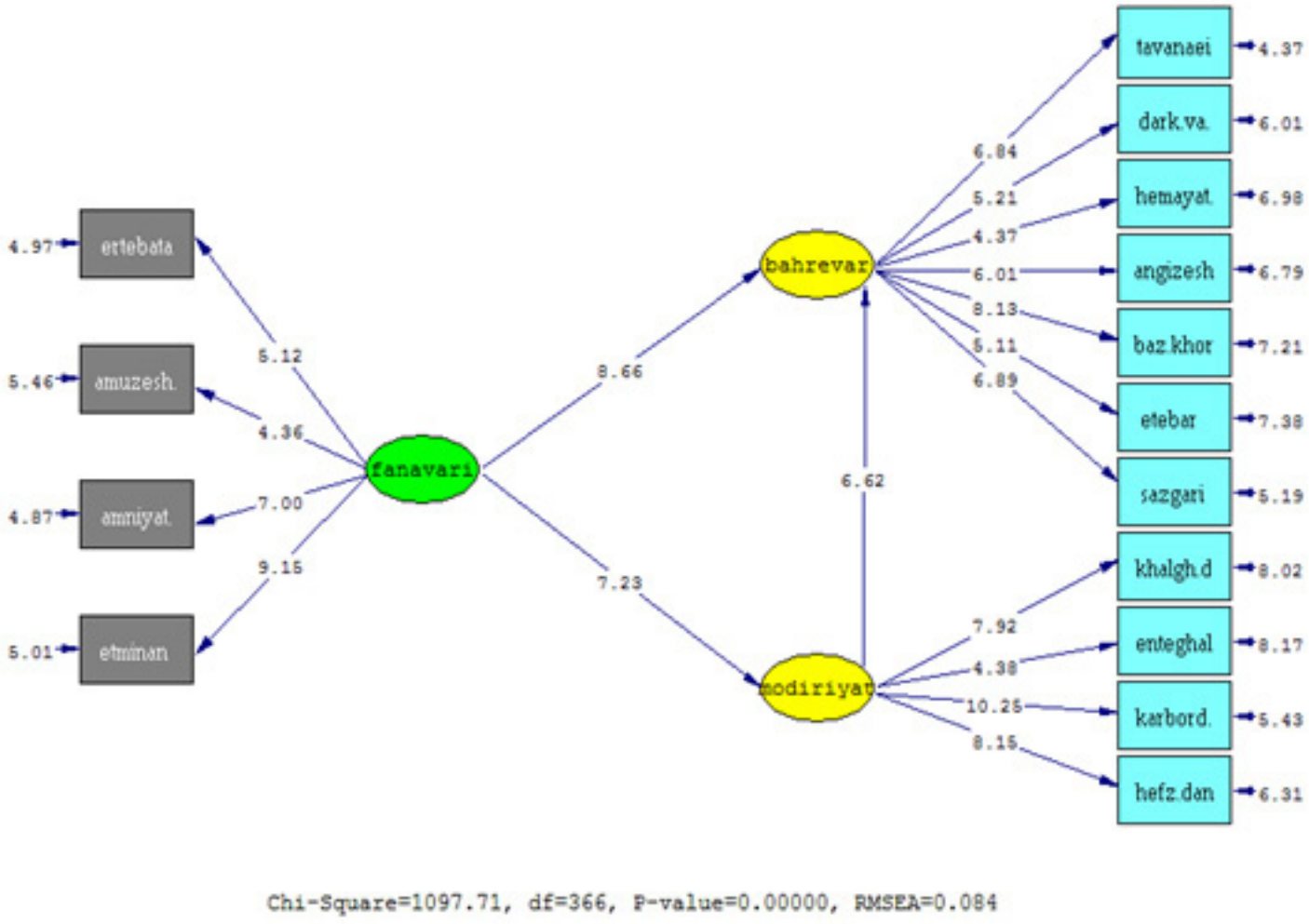


Chart 2: Values standardized coefficients of structural equation modeling

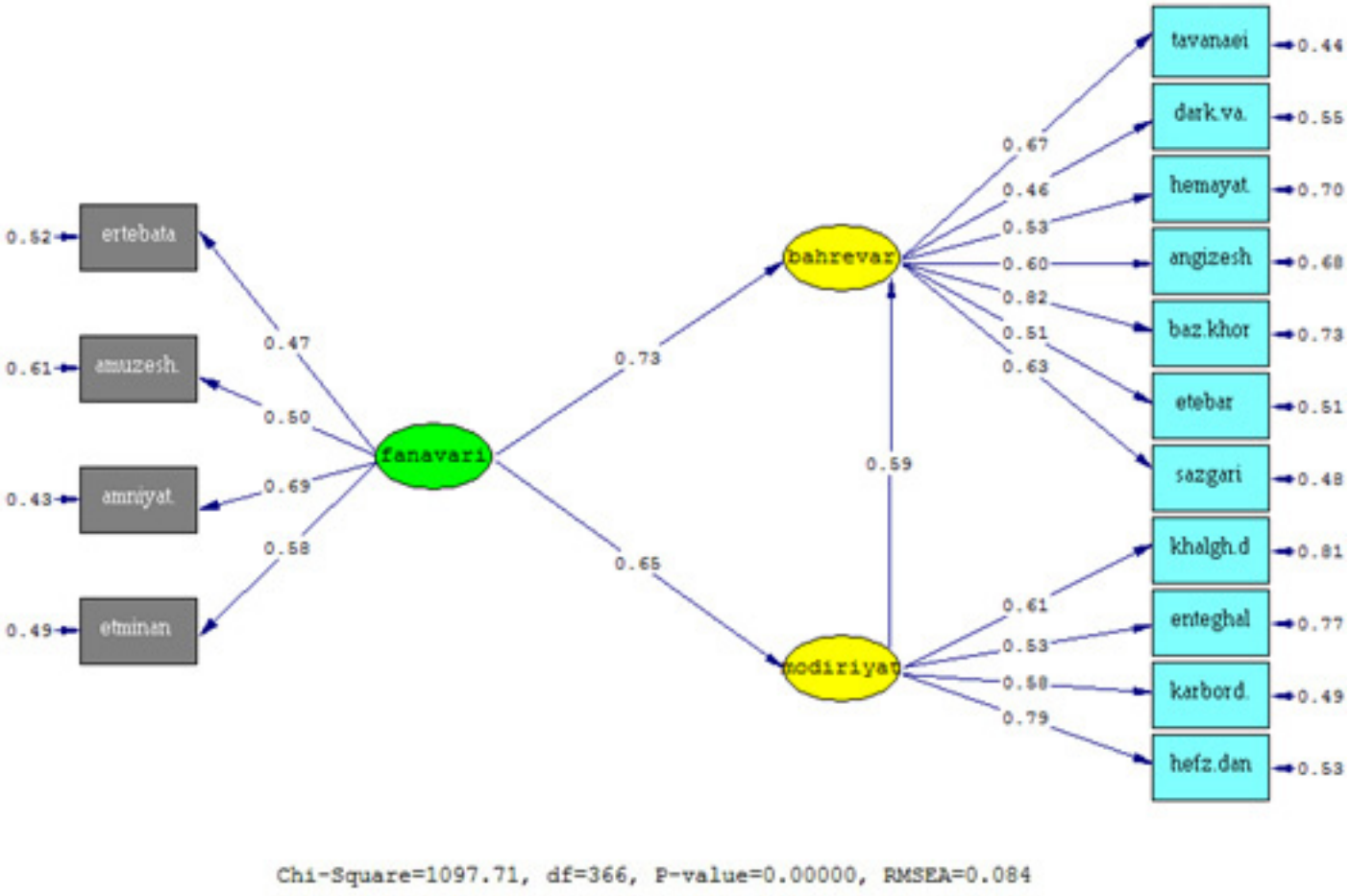


Table 1: The results of the implementation of structural equation modeling

Relation between variables	Value of t	Direct effect (R)	Relation between variables	Value of t	Direct effect (R)	Result	Relation
IT - knowledge management	7.23	0.66	Knowledge management – productivity	6.62	0.59	Accepted	direct

Table 2: Fitting indexes for Model

Index	X^2/df	RMSEA	GFI	AGFI	CFI	NFI	IFI
Calculated value	2.99	0.084	0.91	0.74	0.95	0.92	0.95
Acceptable level	<5	<0/1	>0/90	>0/90	>0/90	>0/90	>0/90
Result	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate

RMSEA: Root- mean- square error of approximation GFI: Goodness- of-fit index AGFI: Adjusted goodness -of-fit index CFI: Comparative fit index NFI: Normed fit index IFI: Incremental fit index

[1] There is a significant relationship between information technology and employees' productivity.
H0: There is not a significant relationship between information technology and employees' productivity.
H1: There is a significant relationship between information technology and employees' productivity

The results of this study show there is a significant relationship between information technology and employees' productivity. Thus H0 is rejected and the research hypothesis is approved. According to the result, numbers significant between IT and productivity is 8.02. So there is a significant relationship between information technology and productivity. According to the result, standard coefficient between information technology and productivity is 0.76. This reflects the strong relationship between information technology and productivity (Chart 3 and 4).

Chart 3: Values significant of structural equation modeling

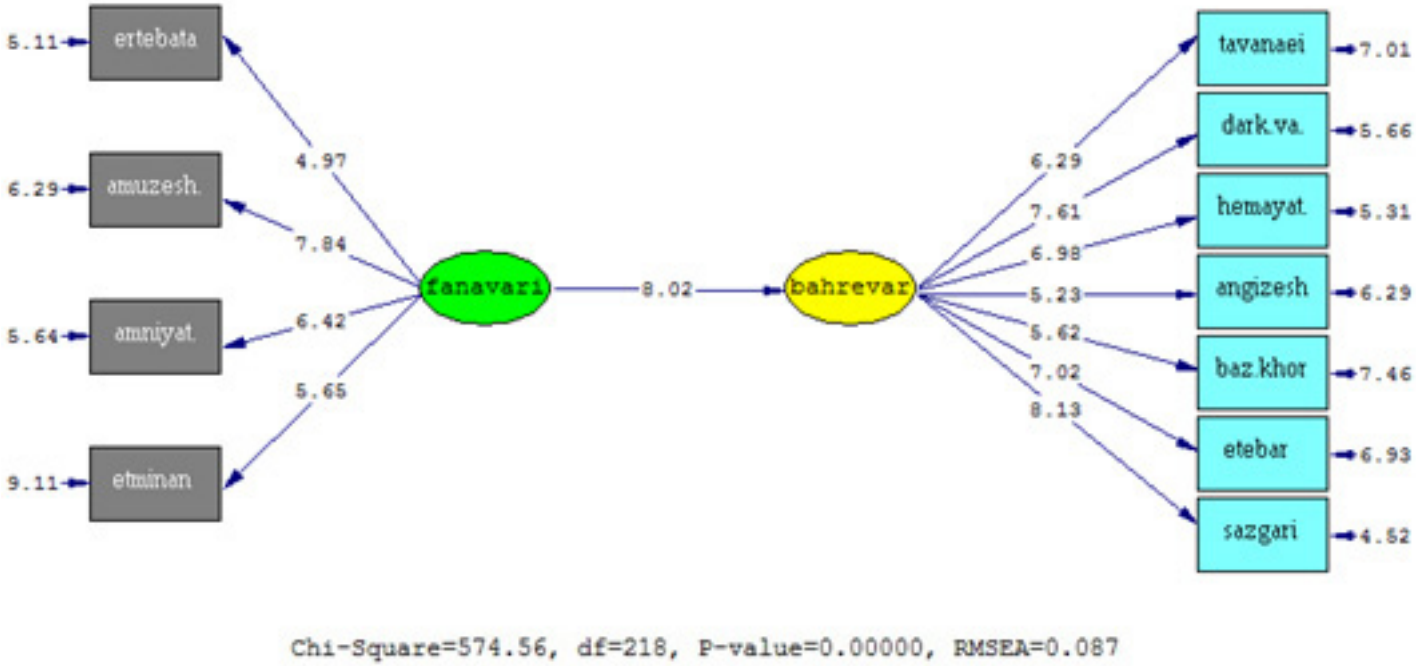


Chart 4: Values standardized coefficients of structural equation modeling

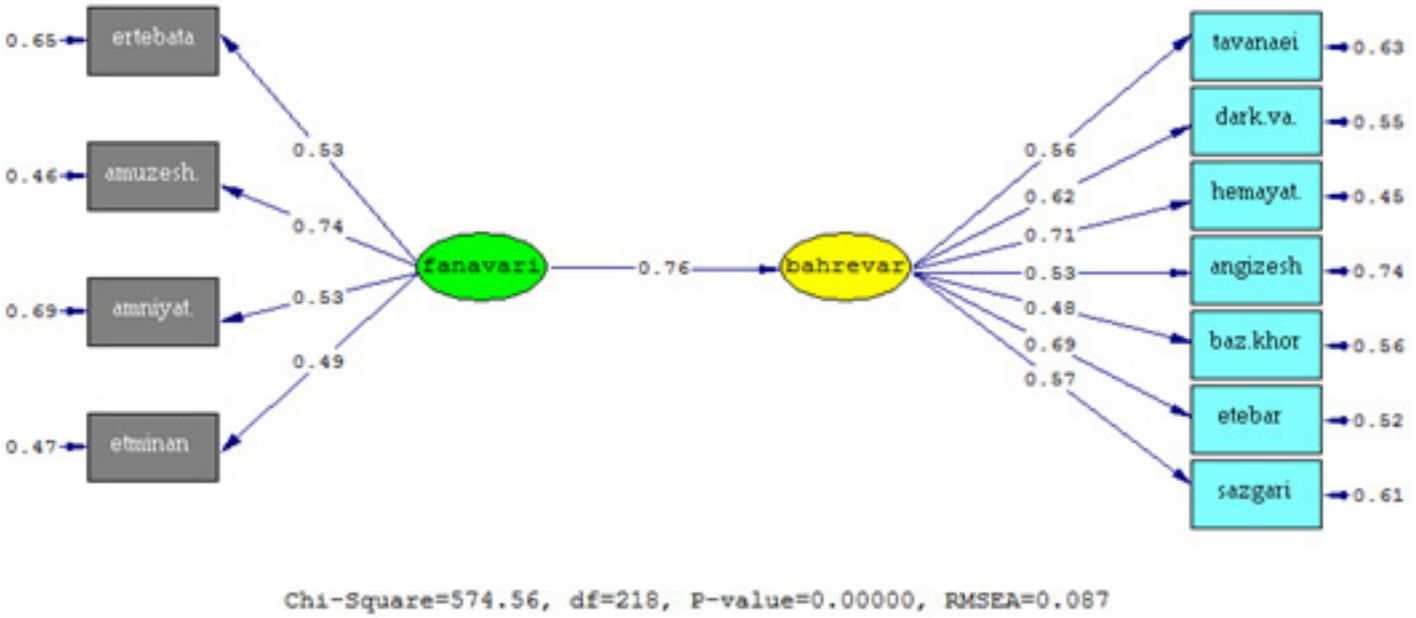


Table 3: The results of the implementation of structural equation modeling

Relation between variables	Value of t	Direct effect (R)	Total effect	Result	Relation
IT - productivity	8.02	0.76	0.76	Accepted	Direct

Table 4: Fitting indexes for Model

Index	X^2/df	RMSEA	GFI	AGFI	CFI	NFI	IFI
Calculated value	2.63	0.087	0.94	0.71	0.91	0.91	0.91
Acceptable level	<5	<0/1	>0/90	>0/90	>0/90	>0/90	>0/90
Result	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate

RMSEA: Root- mean- square error of approximation GFI: Goodness- of-fit index AGFI: Adjusted goodness -of-fit index CFI: Comparative fit index NFI: Normed fit index IFI: Incremental fit index

(2): There is a significant relationship between information technology and knowledge management.
H0: There is not a significant relationship between information technology and knowledge management.
H1: There is a significant relationship between information technology and knowledge management.

The results of this study show there is a significant relationship between information technology and knowledge management. Thus H0 is rejected and research hypothesis is approved. According to the result, numbers significant between IT and knowledge management is 9.12. So there is a significant relationship between information technology and knowledge management. According to the results, standard coefficient between information technology and knowledge management is 0.83. This reflects the strong relationship between information technology and knowledge management (Chart 5 and 6).

Chart 5: Values significant of structural equation modeling

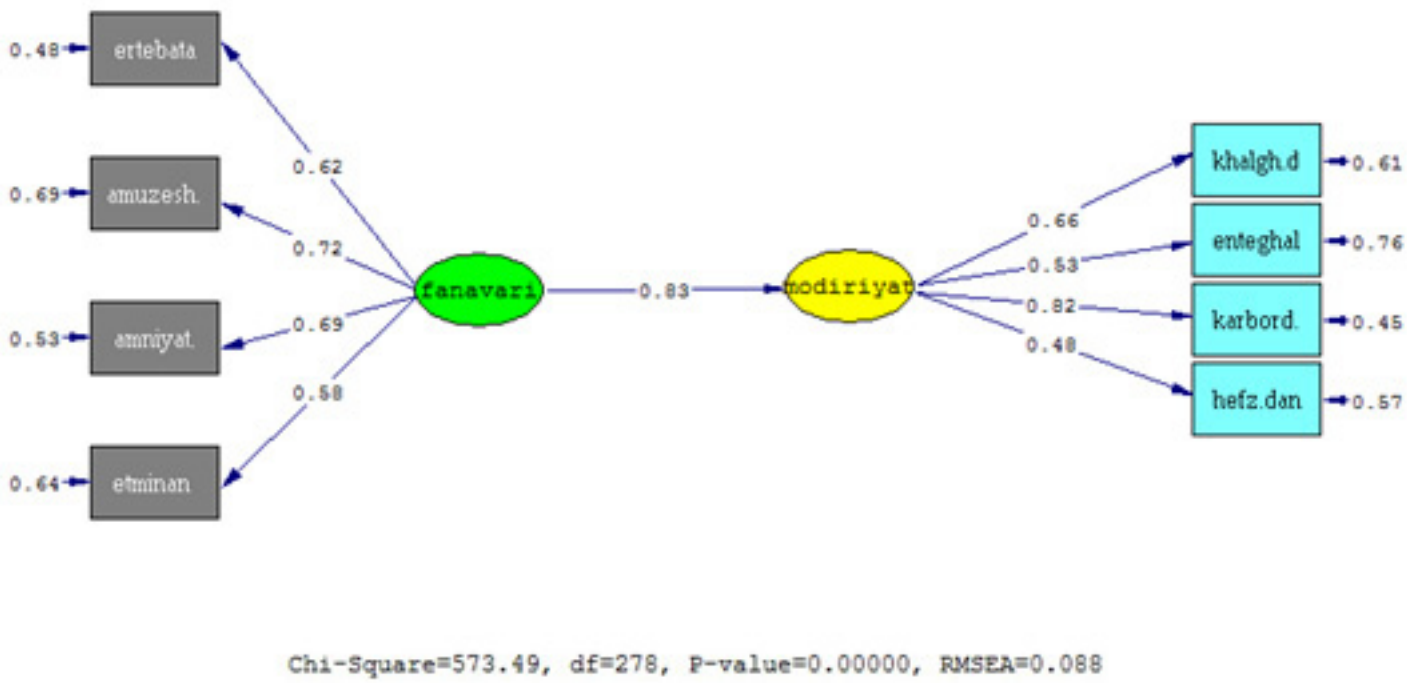


Chart 6: Values standardized coefficients of structural equation modeling

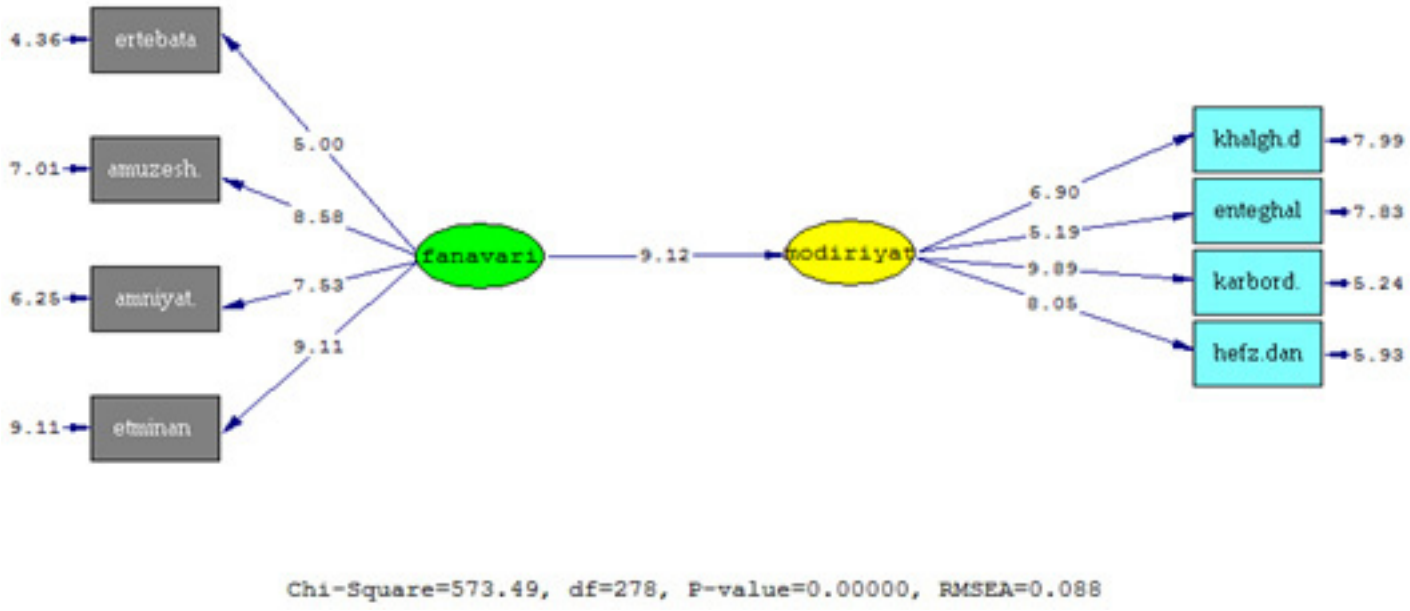


Table 5: The results of the implementation of structural equation modeling

Relation between variables	Value of t	Direct effect (R)	Total effect	Result	Relation
IT - productivity	9.12	0.83	0.83	Accepted	Direct

Table 6: Fitting indexes for Model

Index	x^2/df	RMSEA	GFI	AGFI	CFI	NFI	IFI
Calculated value	2.06	0.088	0.94	0.71	0.91	0.91	0.91
Acceptable level	<5	<0/1	>0/90	>0/90	>0/90	>0/90	>0/90
Result	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate

RMSEA: Root- mean- square error of approximation GFI: Goodness- of-fit index AGFI: Adjusted goodness -of-fit index CFI: Comparative fit index NFI: Normed fit index IFI: Incremental fit index

(3): There is a significant relationship between knowledge management and productivity.
H0: There is not a significant relationship between knowledge management and productivity.
H1: There is a significant relationship between knowledge management and productivity.

The results of this study show there is a significant relationship between knowledge management and productivity. Thus H0 is rejected and research hypotheses is approved. According to the results, numbers significant between knowledge management and productivity is 9.82 so there is a significant relationship between knowledge management and productivity. According to the results, standard coefficient between knowledge management and productivity is 0.83. This reflects the strong relationship between knowledge management and productivity (Chart 7 and 8).

Chart 7: Values significant of structural equation modeling

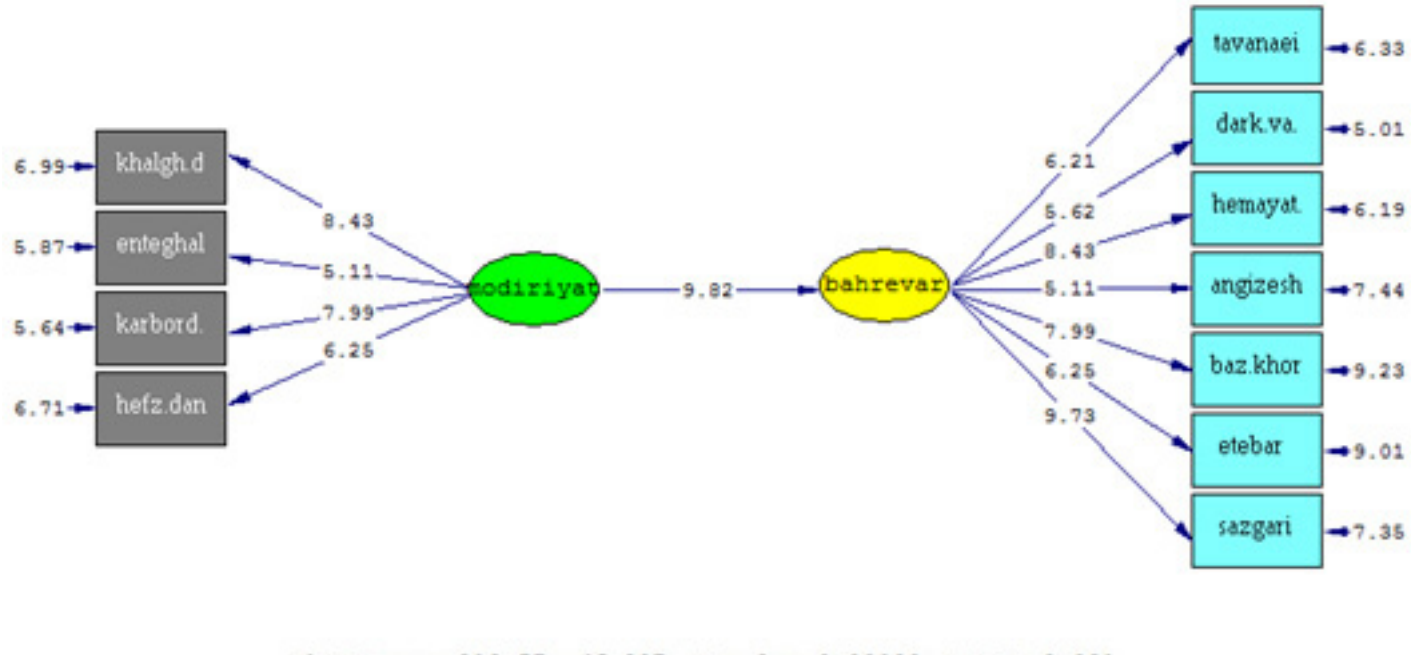


Chart 8: Values standardized coefficients of structural equation modeling

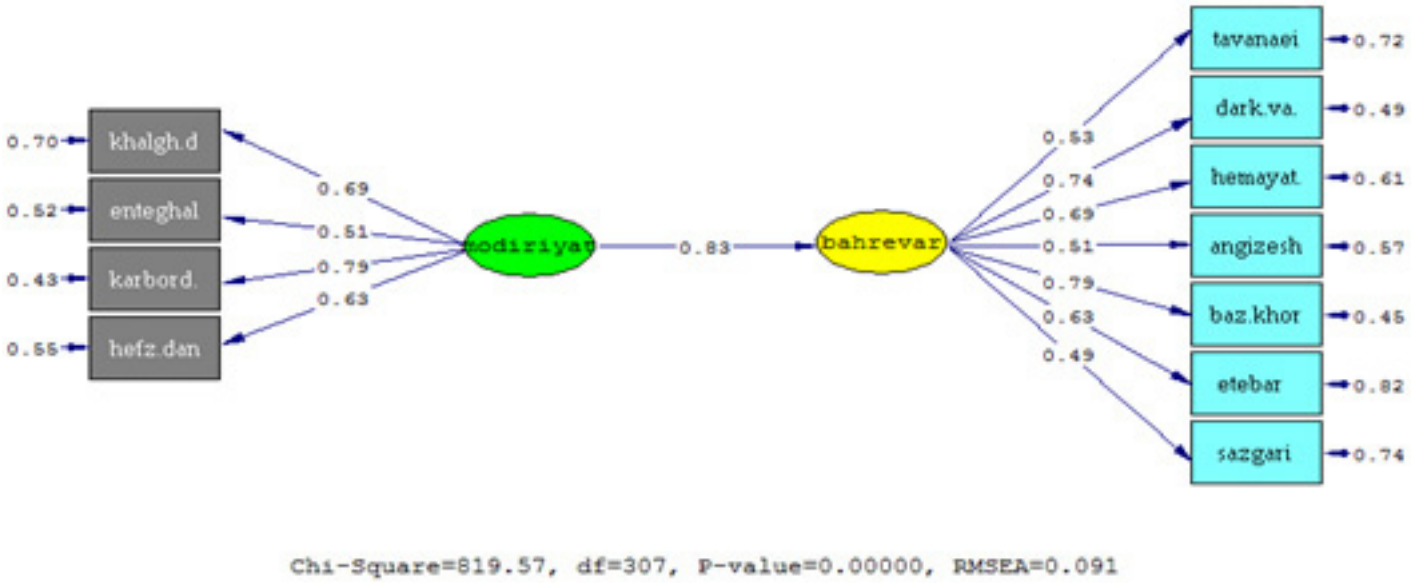


Table 7: The results of the implementation of structural equation modeling

Relation between variables	Value of t	Direct effect (R)	Total effect	Result	Relation
IT - productivity	9.82	0.83	0.83	Accepted	Direct

Table 8: Fitting indexes for Model

Index	x^2/df	RMSEA	GFI	AGFI	CFI	NFI	IFI
Calculated value	2.66	0.091	0.84	0.75	0.95	0.90	0.93
Acceptable level	<5	<0/1	>0/90	>0/90	>0/90	>0/90	>0/90
Result	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate

RMSEA: Root- mean- square error of approximation GFI: Goodness- of-fit index AGFI: Adjusted goodness -of-fit index CFI: Comprative fit index NFI: Normed fit index IFI: Incremental fit index

Discussion and Conclusion

The purpose of this study was to examine the investigate relationship between information technology and employees productivity with mediating role of knowledge management. The results of this study show the there is a significant relationship between information technology and employees productivity with mediating role of knowledge management. This means that information technology affects on productivity through knowledge management. These results are in agreement with results Rotena and Kovar (2016) and Hasanzadeh and Ghahremani (2016). The results of this study show the there is a significant relationship between information technology and employees productivity. This means that if the Employees in the organization use of information technology to increase their productivity. These results are in agreement with results Rotena and Kovar (2016) and Hasanzadeh and Ghahremani (2016). According to the results, there is a significant relationship between information technology and knowledge management. This means that if employees were used of facilities, programs, services and basic technologies in knowledge management will be more successful. These results are in agreement with results Meres (1999). The results of this study show the there is a significant relationship between knowledge management and productivity. This means that if there is collection of appropriate information in organization and used of knowledge employees, finally will be increased employees productivity. These results are in agreement with results Hossini (2012). Hasanzadeh and Ghahremani (2016) in a study entitled investigate the relationship between IT and employees productivity reports there is a significant relationship between IT and employees productivity. Hossini (2012) in a study entitled investigate the relationship between knowledge management and employees productivity reports there is a significant relationship between knowledge management and employees productivity.

Goodarziand (2008) showed that there is a significant positive relationship between knowledge creation and knowledge transfer. In the traditional model, organizations and individuals are often unwilling to transfer and exchange their knowledge. Since instead of looking at knowledge as an organizational resource, consider knowledge as a source of power and a guarantee for the continuity of their jobs and are not willing to share it with others because they are afraid to lose the control of their organization knowledge. In fact, a knowledge that is not circulated in organization won't be developed and eventually will be obsolete and will be changed into an obstacle. In short, knowledge circulation through sharing, business and trade will lead to the production of new knowledge that would seem impossible without the use of information technologies. An organization that supports information sharing and knowledge creation among its employees can define efficient and effective processes and improve its organizational performance and productivity.

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