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Structural Equations Modeling of Relationship Between Psychological Empowerment and Knowledge Management Practices (A Case Study: Social Security Organization Staffs of Ardabil Province, Iran)

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Abstract: The purpose of this research is to examine the relationship between employee psychological empowerment and knowledge management practices. According Spreitzer view access to information related to the various aspects of individual's work such as access to organization's mission and their work unit performance are positively related to their psychological empowerment. Alternately, only when individuals feel empowered will they use such information and proactively implement and incorporate the insights gained from such information at their work. The more empowered they feel to share what they know and access information from others, the more they may engage in these activitiesin in fact they engage in the various knowledge management practice. For this research, the researchers adopt this view of psychological empowerment as an important individual characteristic that effects how people engage in the various knowledge management practice. The procedure of the research is survey method and its statistical population is the staffs in Ardabil province. The sample size is determined 211 of social security organization staffs. Data collection for the observed variables of the LISREL Model was carried out through a self administered questionnaire. The interpretation of the results obtained from LISREL and the results of hypothesis testing showed that there are significant. Relationship between employee empowerment and their enganing in knowledge management practices in the Social Security Organization and in this study the structural equations modeling developed, theoretical models of Spirtzer view was not approved.

Key words: Psychological empowerment, knowledge management practice, social security organization staff, performance, population, Iran

INTRODUCTION

In this knowledge based economy, organizations increasingly have to deal with issues like products and processes complexity, increased relevant knowledge base both technical and non-technical, shorter product life cycles, increased focus on the core competencies, etc. KM can facilitate organizations to encounter various issues related to the emergence of the knowledge-based economy (Anantatmula and Kanungo, 2006; Beijerse, 1999).

The knowledge-based organization recognizes that knowledge is a key strategic resource and asks what do we need to know to formulate and execute the desired strategy? What do we know? And what do the competitors know (Zack, 2003).

A knowledge-based organization attends to two related processes that underlie these direct processes; the effective application of existing knowledge and the creation of new knowledge (Zack, 1999). The goal is fourfold: to ensure that knowledge from one part of a company is applied to activities in other parts; to ensure that knowledge is shared over time, so that the company benefits from past experience; to make it possible for people from various parts of the organization to find each other and collaborate to create new knowledge and to provide opportunities and incentives for experimentation and learning (Zack, 2003)

Based on the conceptualization of knowledge in this research and the role of individuals in creating and managing their task related knowledge, their characteristics can be expected to be a significant factor in their behavioral manifestation. Argote *et al*. (2003) in reviewing emerging themes and suggesting an integrative framework for managing knowledge in organizations indicated that characteristics of units could be a key driver of effective knowledge management. Moreover, the perceptual filters people use to interpret the actions and events influences their acquisition and use of knowledge (Daft and Weick, 1984; Fiol, 1994) (Sabherwal and Becerra-Fernandez, 2003). Knowledge workers need to be empowered to foster knowledge

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creation and innovation (Doll *et al*., 2005). Empowered workers take an active role in seeking knowledge and other activities whereby they enhance what they know to successfully conduct their task. In this research due to the broad range of tasks that are involved in managing one's knowledge and the integrated nature of knowing in practice, psychological empowerment at the level of work is more appropriate.

Employee empowerment is described as enabling or authorizing employees to make decisions to solve guest issues by themselves (Conger and Kanugo, 1988; Jha and Nair, 2008). Psychological empowerment is defined as a motivational construct manifested through a constellation of experienced psychological cognitions; meaning, competence, self-determination and impact (Spreitzer, 1995; Thomas and Velthouse, 1990).

In this study, the researchers examin effects of psychological empowerment as an important individual characteristic on how people engage in the various knowledge management practice in social security organization.

Psychological empowerment: Definitions of empowerment generally include the notion of decentralization of decision-making authority and responsibility to lower level employees allowing them discretion to act on their own to think strategically and to be personally responsible for the quality of their tasks in order to improve the organizations functioning (Mills and Ungson, 2003; Pardo Del Val and Lloyd, 2003; Barton and Barton, 2011).

As such, empowerment is conceptualized as a set of managerial practices focused on delegating decision-making authority (Spreitzer *et al*., 1999). However, whilst management can create a context for empowerment, employees must choose to be empowered (Quinn and Spreitzer, 1997). Empowerment is not something that management does to employees but a mindset that employees have about their role in the organization; a form of intrinsic motivation termed psychological empowerment (Thomas and Velthouse, 1990). A positive relationship between psychological empowerment and organization performance has been suggested (Humborstad *et al*., 2008). More specifically, a number of studies argue that employees who feel more empowered are more motivated, competent and effective in their work; more innovative and less scared to try something new (Quinn and Spreitzer, 1997). Consequently, psychological empowerment in the conceptual model describes a motivational construct which leads to increased intrinsic task motivation manifested on behalf of employees in a set of cognitions relating to their work role (Mills and Ungson, 2003; Spreitzer, 1995; Spreitzer *et al*., 1997). There are two streams of research on the conceptualization of empowerment, structural and psychological (Jha and Nair, 2008). Delegation of decision making power from higher to lower levels in the organizational hierarchy (Heller, 2003) as well as a dyadic relationship between empowering leadership and subordinate employees (Ahearnen *et al*., 2005; Zhang and Bartol, 2010).

The psychological empowerment approach conceptualizes empowerment as an experienced psychological state or set of cognition (Conger and Kanugo, 1988; Zhang and Bartol, 2010).

Thus, empowerment has been viewed as a motivational construct described as an intrinsic need for self-determination or a belief in personal self-efficacy (Conger and Kanugo, 1988). Due to its complex nature, many researchers proposed a multi-faceted structure of empowerment construct (Menon, 2001; Spreitzer, 1995; Thomas and Velthouse, 1990). Especially, Thomas and Velthouse (1990) extended Conger and Kaungo's psychological empowerment approach by specifying a set of assessments such as: meaningfulness, competence, choice and impact. Drawing on Conger and Kanugo (1988), Thomas and Velthouse (1990) and Spreitzer (1995) defined empowerment as a psychological state and motivational construct manifested in 4 cognitions; meaning, competence, self-determination and impact. The dimension of meaning represents an individual's intrinsic care about a task and is evaluated in relation to one's own standards (Thomas and Velthouse, 1990).

When employees are able to derive personal meaning from their job, they will be motivated and a higher level of job satisfaction will be resulted (Spreitzer, 1995; Thomas and Velthouse, 1990). The dimension of competence is a belief that one possesses the skills and abilities necessary to perform a job well (Thomas and Velthouse, 1990). A feeling of lower competence leads to anxiety and avoidance behavior while a high level of self-efficacy often results in initiating behavior and work enjoyment (Bandura, 1997; Gist, 1987). Self-determination refers to the feeling of having choice and control over one's work (Thomas and Velthouse, 1990). It addresses an employee's need for autonomy during the course of work. The researchers submit that employees with collectivistic orientations (high versus low) may cognitively interpret the effects of self-determination in dissimilar ways. Finally, impact refers to the degree to which an individual can influence his/her work outcomes. It reflects one's beliefs about individual performance outcome and person-environment relationships (Mishra and Spreitzer,

1998; Spretizer, 1995). This study focuses on employees' psychological empowerment by using Spreitzer's conceptualization.

According to Spreitzer (1995), these four factors act additively to determine the extent of psychological empowerment experienced by employees and thus, enable them to exercise their empowered role. Together, these cognitions reflect an active rather than passive orientation to the work role whereby the work situation is not seen as given but one that can be shaped by employee actions (Spreitzer *et al*., 1999).

Thus, it is suggested that leaves employees optimistic, involved, committed and able to cope with adversity where they feel a sense of responsibility and capability (Hardy and Leiba-OSullivan, 1998). Employees thus develop a feeling of empowerment which can enhance the value of their work, increase job satisfaction and contribute to work productivity and success (Koberg *et al*., 1999).

Through psychological empowerment organizational leaders encourage employees to feel that they have power over significant aspects of their work creating both a sense of ownership in their work and in the legitimate organization. By empowering employees, leaders exchange the power, control and supervision that they have over their employees with management practices that emphasize support and co-operation (Chan *et al*., 2008).

Knowledge management practices: There are various concepts, conflicting definitions and overlapping views among the researchers and practitioners but central theme is still the same for all of them, i.e., managing the knowledge and encouraging people to share the same to create the value adding products and services (Bhatt, 2001; Chorafas, 1987; Malhotra, 1998).

KM is the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied (Anand, 2011).

KM as a set of procedures, infrastructures, technical and managerial tools, designed towards creating, sharing and leveraging information and knowledge within and around organization (Bounfour, 2003). KM as a strategy to be developed in a firm to ensure that knowledge reaches the right people at the right time and that those people share and use the information to improve the organizations functionin. KM is the process of creating, capturing and using knowledge to enhance organizational performance (Bassi, 1997). KM is how an organization identifies, creates captures, acquires, shares and leverages knowledge (Rumizen, 2002). KM concerns the formalization of and access to experience, knowledge and expertise that create new capabilities, enable superior performance, encourage innovation and enhance customer value (Beckman, 1999).

Knowledge agents whether it is an individual, a group or an organizational unit, engage in various processes in dealing with knowledge and information they have this research conceptualizes these processes as knowledge creation sharing the knowledge with other entities, capturing such information in various artifacts and processes, accessing knowledge from other entities and applying their knowledge for various organizational tasks.

For example, individuals reflect on what they know to create new knowledge and apply their creativity for novel production, groups brainstorm creativity for novel production, groups brainstorm to generate new ideas and their experience is used in new contexts and for new problems and organizations improvise in novel situations to create new knowledge (Vorbeck and Finke, 2001; Madjar *et al*., 2002; Miner *et al*., 2001). The new knowledge that is created is used to solve problems or is developed into tangible and intangible artifacts by these knowledge agents.

This new knowledge can be then stored in databases or embedded in organizational routines and thus captured by the knowledge agents or it can be shared between them. When knowledge agents use their knowledge that is created or accessed from others or from what they have captured, new insights are generated (Vorbeck and Finke, 2001). If not, the experience contributes to reinforcing what is already known and thus still contributes to their knowledge. When the agents use their knowledge, it is often transformed into artifacts which embody their knowledge and thus attain a certain degree of permanence. In a social context, the use of an individual's knowledge becomes the basis for sharing knowledge that is difficult to be made explicit. For example, an apprentice learning a trade from an expert is a situation were the sharing of knowledge occurs as the expert uses his or her knowledge in performing a particular task.

Literature base definition of variables of knowledge management practices

Knowledge creation: The extent to which individuals engage in activities that creates new knowledge (Von Krogh, 1998; Tiwana, 2002; Alavi and Leidner, 1999; Davenport and Grover, 2001; Nonaka, 1994).

Knowledge capture: The extent to which individuals engage in activities that captures their knowledge (Walsh, 1995; Tiwana, 2002; Alavi and Leidner, 1999; Gray and Fu, 2004; Zollo and Winter, 2003; Serban and Luan, 2002; Davenport and Grover, 2001).

Knowledge sharing: The extent to which individuals engage in activities that share their knowledge with others (Alavi and Leidner, 1999; Tiwana, 2002; Zollo and Winter, 2003; Nevis *et al*., 1995; Davenport and Grover, 2001).

Knowledge access: The extent to which individuals engage in activities that enable them to access needed information (Tiwana, 2002; Alavi and Leidner, 1999; Serban and Luan, 2002; Nevis *et al*., 1995; Brown and Duguid, 1998).

Knowledge application: The extent to which individuals engage in activities by apply their knowledge to which they accomplish their work. It can be seen as realizing the value of one's knowledge (Alavi and Leidner, 1999; Tiwana, 2002; Serban and Luan, 2002; Nevis *et al*., 1995; Davenport and Grover, 2001).

Psychological empowerment and knowledge management practices: This research conceptualizes empowerment as an individual psychological characteristic or their personal perceptions in relation to their work, i.e., their cognitive task assessments. In this respect, it is different from the more global feeling of empowerment and is directed at their perceptions of meaning, competence, self-determination and impact in the individual's work setting. Though these cognitions may be shaped by the interaction of the task, technology and the individual, the focus is on the individuals' feeling of empowerment during the task.

Task centered empowerment is found to be an important aspect of many individual actions such as their innovative behaviors and other performance outcomes (Spreitzer, 1995). Spreitzer (1995) found that access to information related to the various spects of individual's work such as access to organization's mission and their a work unit performance are positively related to their psychological empowerment. Alternately, only when individuals feel empowered will they use such information and proactively implement and incorporate the insights gained from such information at their work.

The more empowered they feel to share what they know and access information from others, the more they may engage in these activities. In the certain knowledge work contexts, Doll *et al.* (2005) content that knowledge creation and innovation ceases without empowered human agents.

Intrinsically motivated individuals engage in more knowledge creation, they are usually more willing to share their knowledge, they pro-actively seek new, they can use in the organizational context and they may also try to capture more knowledge because of their increased knowledge needs. Since, empowered individuals feel that they are more autonomous and that their actions have a greater impact, they could be expected to engage in various knowledge management activities to a greater extent.

Similarly, individuals who feel competent at their work and thus have greater selfefficacy feelings may share their knowledge to a greater extent than individuals who does not feel competent. Such individuals may also generate more knowledge, try to access and capture more of what they know and use their knowledge to a greater extent than individuals who feel less competent (Muhammad, 2006).

Muhammad (2006)'s study in manufacturing context, the results indicate that knowledge workers' psychological empowerment was found to play a significant role in impacting their knowledge management practices. The results suggest that empowered tend individuals to engage in the various knowledge management practices more extensively.

Conceptual model research: Here, the researchers present the conceptual model for this research (Fig. 1).

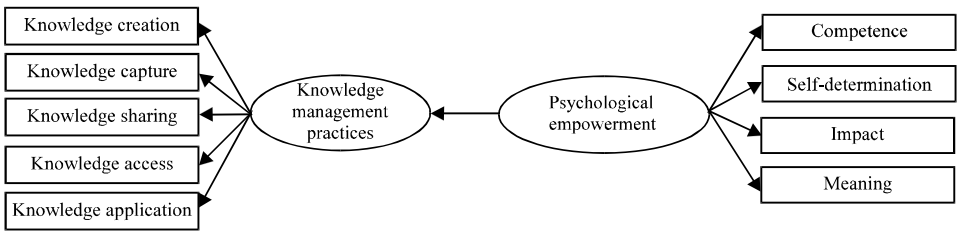

Fig. 1: Conceptual model

Research hypotheses: There is relationship between psychological empowerment and knowledge management practices in social security organization.

Secondary research hypotheses:

H_1: There is relationship between psychological empowerment and knowledge creationt among social security organization staff

H_2: There is relationship between psychological empowerment and knowledge sharing among social security organization staff

H_3: There is relationship between psychological empowerment and knowledge capture among social security organization staff

H_4: There is relationship between psychological empowerment and knowledge access among social security organization staff

H_5: There is relationship between psychological empowerment and knowledge creationt among social security organization staff

H_6: There is relationship between psychological empowerment and knowledge applicationt among social security organization staff

MATERIALS AND METHODS

According to the research questions and hypotheses, a survey research study is based on the correlation method can be considered in terms of applied research, statistical population of present study is all of employees of social security organization in Ardabil province. The whole population was about 211 because low number of statistical population and in order to validate the research and enhance the confidence level of population members in this members research include all of the population.

Questionnaire that used in this study includes 19 questions of spritzer psychological mpowerment measure (standard questionnaire) and questions related to knowledge management practices which includes 30 questions to determine. The reliability of these questions, the test was conducted on 40 staff, 25 questions were finally extracted and the final questionnaire was developed.

Also in this study to determine the validity of measurement tools, initially in a standard questionnaire was applied using studies and related research literature and it localized. And then measure the traits desired in question by a group of experts consisting of university professors and experts of social organization was approved. And in order to determine the reliability of questionnaire Cronbach's Alpha Method used. By using SPSS 17 Cronbach's coefficient alpha for items of the psychological empowerment questionnaire with 84% and and knowledge manegment practice with 81% shows that reliability of questionnaire is high and acceptable and to design Structural Model LISREL 8.5 is used.

RESULTS AND DISCUSSION

In this study, to analyze the hypotheses the Pearson correlation test was used the results of this test is shown in Table 1. In order to assess the impact of psychological empowerment as a independent variable on knowledge management practices, variables as a dependent variable correlation test results showes significant relationship with knowledge sharing, knowledge access, knowledge application and non-significant relation ship with knowledge creation, knowledge capture.

A brief introduction to LISREL: The main methodology (or mathematical model) used in this study is LISREL. LISREL is an acronym for the Linear Structural Relations Model. Properly speaking, LISREL is a computer program that analyzes covariance structures but the widespread use of the LISREL Software has identified the name of the program with the statistical procedures it performs. It is considered the most general method for the analysis of causal hypotheses on the basis of non-experimental data. LISREL for windows, Version 8.5 by Scientific Software International was used in this study. There are two basic types of variables in LISREL, the latent variables represented by lower case letters inside the round circles and the observed variables represented by upper case letters inside rectangles shown in Fig. 1.

Latent variables are those that are formulated in terms of theoretical or hypothetical concepts, i.e., constructs which are not directly measurable or observable. Observed variables are those that are directly measurable or observable and that can be used as indicators of latent variables. In other words, latent variables are represented

Table 1: Analysis results

Psychological empowerment	Parameters	Independed variable/ depended variabel
70/0	Correlation coefficient	Knowledge management practices
0001/0	level of significance	
003/0	Correlation coefficient	Knowledge creation
21/0	level of significance	
54/0	Correlation coefficient	Knowledge sharing
0007/0	level of significance	
032/0	Correlation coefficient	Knowledge capture
15/0	level of significance	
42/0	Correlation coefficient	Knowledge access
000/0	level of significance	
47/0	Correlation coefficient	Knowledge application
0004/0	level of significance	

or measured by one or more observed variables. The relationships between the latent variables and the observed variables of the LISREL Model are displayed in a path diagram such as the one shown in Fig. 1.

In the following discussion, variable names are indicated by italics. Variables on the left side of Fig. 1 are dependent (or output) variable knowledge management [Eta (η)] is the dependent latent variable and knowledge creation, knowledge capture, knowledge sharing, knowledge access and knowledge application are the dependent observed variables measuring this concept.

Variables on the right side of Fig. 1 are the independent (or input) variable psychological empowerment [Ksi (ξ)] is the independent latent variables and competence, self-determination, impact and meaning are the independent observed variables measuring these concepts. The relationships among the latent variables determine how the independent variables influence or affect the dependent variables.

Figure 1 shows the hypothesized psychological empowerment impact on the Knowledge Management Practice Model that is assessed. The model proposes that overall knowledge management is influenced by the dimensions of psychological empowerment impact. The details of each construct were discussed and the validity and reliability of measurement scales were confirmed before. In this study, the proposed structural model is assessed.

The fit of the model was evaluated with various measures (Bentler, 1995). Kelloway (1998) has suggested that the use of Chi-square (χ^2) test is reasonable when the study involves a large sample. However as the Chi-square (χ^2) is very sensitive to sample size, the degree of freedom can be used as an adjusting standard by which to judge whether Chi-square is large or small (Jeoreskog and Seorbom, 1989). Therefore in this study, the Chi-square (χ^2) per degree of freedom can be used and a ratio <5 shows reasonable fit while a ratio between 1 and 2 is excellent fit. The ratio of the model in Fig. 2 was 2.95 indicating a fairly good fit.

Other types of goodness-of-fit measures include Root Mean Squared Error of Approximation (RMSEA), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI) and the Comparative Fit Index (CFI). A RMSEA value close to 0 shows a near perfect fit. The NFI, NNFI, CFI are always between 0 and 1 with any value >0.9 indicating a good fit and the value one suggesting a perfect fit. The model in Fig. 2 had a RMSEA of 0.074 and the NFI, NNFI and CFI values >0.85 showing that the model had a highly satisfactory fit. Figure 2 shows the summary of the maximum likelihood parameter estimates, lambda and the significance of the t-values as indicated by asterisks for the model. The statistically significant relationships are shown.

In a LISREL diagram (Fig. 2), the number on each arrow pointing from a latent variable to an observed variable is the loading which can be interpreted as the validity coefficient of the observed variable for the latent variable. For the situation relationships between psychological empowerment and knowledge management practice (Fig. 2), a comparison of the two loading values for the psychological empowerment variable shows that the use of meaning is a more valid indicator than the use of competence, self-determination and impact. In other words, meaning is more important than competence, self-determination and impact for psychological empowerment. Moreover, the coefficient difference between meaning and competence, self-determination and impact, there is greater (0.79 vs. 0.74, 0.58 and 0.63) which suggests a heavier reliance on meaning by components of psychological empowerment.

Figure 2 shows path estimates for the accepted structural model. Psychological empowerment results indicate that psychological empowerment are more likely to report knowledge management practice (B = 0.74). On another hand, this research showed that other variables such as competence, self-determination, impact and meaning have direct effect in the knowledge management social security organization staffs of Ardabil.

So for the situation, relationships between psychological empowerment and knowledge management practices (Fig. 2). A comparison of the 2 loading values for the knowledge management practice variable shows that the use of knowledge sharing is a more valid indicator than the use of knowledge access and knowledge application. In other words, knowledge sharing is more

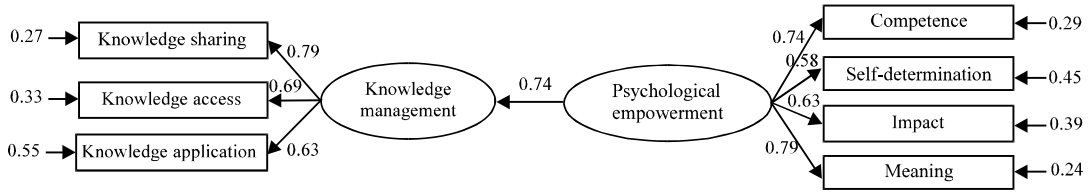

Fig. 2: Accepted structural model

important than knowledge access and knowledge application for knowledge management practice. Moreover, the coefficient difference between knowledge sharing and knowledge access and knowledge application, there is greater (0.79 vs. 0.69 and 0.63) which suggests a heavier reliance on knowledge sharing by components of knowledge management practices.

This research inclued a main hypothesis of and 5 secondary hypotheses and based the conceptual model, a Structural Equations Model suggested by using inferential statistics to try to examine the relationship between psychological empowerment and knowledge management practices and the 5 component of knowledge management practice was examined by Pearson correlation test.

According to the results, the main hypothesis a direct and positive correlation coefficient with 70% between psychological empowerment and knowledge management, practices with 95% probability that it is confirm this hypothesis.

But survey show that there is non-significant relationship between psychological empowerment and knowledge creation and knowledge capture and 2 variables in the design of structural models with low t-values are removed. The results of the 1st secondary hypothesis test indicate that there was no evidence of a significant relationship between psychological empowerment and knowledge creation.

According to this relationship, the increase in the level of psychological empowerment of employees has no effect to increase or decrease employees. Enganing in knowledge creation practice in the organization.

The results of the 2nd secondary hypothesis test indicate confirmed and a significant relationship between psychological empowerment and knowledge sharing this was directly but intermediate level (0.54).

It means that the increase in the level of psychological empowerment leads to increase knowledge sharing among employees of social security organization. The 3rd, secondary hypothesis test results showes no confirmed and no significant relationship between psychological empowerment and knowledge capturing. According to this relationship, increase in the level of psychological empowerment of employee's do not lead to any increase or decrease in the employee's knowledge captured. The 4th secondary hypothesis test results indicate a direct relationship between psychological empowerment and Knowledge access with 42% positive correlation coefficient. In other words, how much employees psychological empowermed in the higher level in the size 42% level of access to knowledge will be changed.

The 5th secondary hypothesis test results indicate a direct relationship between psychological empowerment and knowledge utilization with 47% positive correlation coefficient. In other words, how much employee's psychological empowermed in the appropriate level in the size 47% level of knowledge application will be changed? In this study, the relationship between psychological empowerment and knowledge management practices are examined and the results of the relationship between psychological empowerment and knowledge management practices and secondary related hypotheses indicate that secondary hypothesises confirmed apart from knowledge creating and capturing. Study results does not match with the results of the Muhammad (2006). Also based on the theoretical principles used and the results of structural equation modeling. Spritzer's view that fefer to relationship between psychological empowerment with knowledge management practices In this study, only two components namely, knowledge creation and knowledge capture was overturned.

CONCLUSION

According to the results, among employees of the social security organization offices in Ardabil province people who feel more empowered enganing in knowledge management practices more than people who feel less. So, individuals empowerment and strengthen the sense of empowerment one of the important aspect can influence sharing, access and use of knowledge by staff in social security offices. Overall, according to research findings based on statistical hypothesis testing can be concluded that there is a significant relationship between employee empowerment and their enganing in knowledge management practices in the social security organization And in this study, the structural equations modeling developed, theoretical models of Spirtzer's view was not approved.

NOMENCLATURE

x = Measured independent variable
y = Measured dependent variable
ξ = Latent exogenous construct explained by x-variables
η = Latent endogenous construct explained by y-variables
δ = Error for x-variable
ϵ = Error for y-variable
λ = Correlation between measured variables and all latent constructs
γ = Correlation between latent constructs m (exogenous) and g (endogenous)

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