THE INVESTIGATION OF INTERMEDIARY EFFECT OF STRATEGIC HUMAN RESOURCE MANAGEMENT ON RELATION BETWEEN KNOWLEDGE MANAGEMENT AND PERFORMANCE OF ARAS FREE TRADE ZONE COMPANIES

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Abstract. The aim of this study is to investigate the intermediary effect of strategic human resource management on the relation between knowledge management and performance of companies in Aras free-trade zone. This research is applicable in terms of aim, descriptive and correlated in terms of data gathering and quantitative in terms of the type of the gathered data. Statistical population of this study were managers of 310 companies in Aras free-trade zone. As it was not possible to measure the number of managers at all levels, the statistical population of the study was considered as indefinite and the statistical sample was considered 384 managers in number. Results derived from findings of this research show that strategic human resource management influence the relation between knowledge management and performance.

Keywords: strategic human resource management, knowledge management, performance, Aras free-trade zone

1 Introduction

Nowadays all companies are working in a dynamic and competitive environment where competition is increasingly getting more serious and the traditional sources of competition can neither ensure the institutions' survival nor meet their accommodation with customers' needs. There are so many points which highlight the necessity of paying attention to strategic human resource management, especially the ability to provide companies with competitive and economic advantages (Sanchez, 2015). Barney (1991) points out that missing resources can produce a sustainable competitive advantage. This way, knowledge and human capital are considered as valuable properties for organizations, and efficient management of them makes it possible to use the employees' proficiency and knowledge to achieve the organizational objectives, to meet peripheral needs and also to improve organizational performance. While some studies have mentioned that knowledge management increases the organizational performance (Hsiao, Chen and Chang, 2001; Lopez-Nicolas and Mero'no-Cerdan, 2011; Rasola, Bosilic and Voksik), some others argue that it is only human resource management that is effective in improving that factor (Chen & Huang, 2009; Youndt, Snell, Dean and Lepak, 1996). Moreover, some studies show that knowledge management and human resource management are closely related to each other (Theriou & Chatzoglou, 2008; Wang, Chiang & Tung, 2012). Most of these studies are selected to analyze the intermediary effect of knowledge management on the relation between human resource management and the organizational performance (Jackson, Schuler and Jiang, 2014). It is interesting that few studies have mentioned the reverse relationship between these concepts. It may be expected that a probably powerful interaction between knowledge management and human resource management be taken into consideration (Liao, 2011). Therefore, the main purpose of this is to introduce a different viewpoint about the role of human resource management and to react to recent attempts to create the other causal models in order to analyze the arousing or intermediary role of human resource management regarding the relation between knowledge management and organizational performance (Jackson et al, 2014; Jiang et al, 2013). This new viewpoint is so important that it can determine whether the given human resource management systems are able to turn the organization's needs and approaches into a plan of activities related to strategic human resources or not. These activities can improve the employees' behaviors and as a result, the organization will come up with better consequences (Jiang et al, 2013). So we examine the intermediary effects of the activities related to a given strategic performance in domains including accessibility, education, participation, performance evaluation

and reward (Chen & Huang, 2009; Huslid, 1995) in order to realize the need for experimental studies to analyze human resource management systems, like exciting processes in improving the organizational approaches and objectives (Jiang et al, 2013). It is expected that these activities can serve as a medium for the relation between knowledge management which has been measured using formulation and customization approaches, and organizational performance. These relations will be examined using the structural equation modeling in a sample of 191 Spanish industrial organizations. The positive and specific effect of this study can be summarized in three parts. First it expands the limited studies which have been conducted to specify a direction towards the approaches of human resource management. Furthermore, as a mediator of knowledge management for the organization it makes a connection between its objectives and its better performance (Jiang et al, 2013; Wang et al, 2012). Second, it supports the theory which says knowledge management of employees is necessary to maximize the organizational performance through activities related to strategic human resource (Chuang et al, 2013; Liao, 2011). Finally, it contributes to provide explanations about the relation between the given approaches of knowledge management and the qualified performance in the operation systems from a point of view which leads to a better organizational performance (Chen & Haung, 2009).

2. Research method

2.1 Research hypotheses

1. Knowledge management has a positive and meaningful effect on organizational performance.

2. Knowledge management has a positive and meaningful effect on strategic human resource management.

3. Strategic human resource management has a positive and meaningful effect on organizational performance.

4. Strategic human resource management has a positive and meaningful effect on the relation between knowledge management and organizational performance.

2.2 Research design

The present study is an applicable research in terms of aim, a descriptive and survey research in terms of data gathering methods. Library survey has been done to collect data.

The statistical population is consisted of the managers of Aras free-trade zone companies. There were 310 companies in this study which were operating in different fields in Aras free-trade zone. As it was not possible to count all the managers who took part in this study, and also there was no list of their names, we had no other choice but to consider the statistical population as indefinite. According the Cochran formula for the indefinite population, 384 chief operating officers, middle managers and chief administrative officers were chosen for this research. We contacted with the managers of more than 250 companies via E-mail, phone and social networks. As the result 367 managers among them accepted to take part in the study and respond to the questions. The questionnaire used for this purpose was based on some other similar questionnaires. Its validity was approved by a team of researchers and professors in the Azad university of Tabriz.

2.3 Statistical analysis

Structural equation model or the multivariate analysis with latent variables is one of the promising methods in causal relations

among variables. This statistical method refers to some general models including; confirmatory factor analysis, simultaneous equation models, path analysis, multiple regression, analysis of variance and other statistical methods. Accordingly, the structural equation model is a comprehensive statistical approach for testing hypotheses regarding the relations between manifest and latent variables. The primary focus is on the latent variables which are defined by commensurable indicators and manifest variables (Sheykh Esma'ieli, 2000).

The structural equation modelling has been used to specify the effects of knowledge management on strategic human resource management and organizational performance. This method examines the theoretical relations among the given structural

conditions and makes it possible to estimate causal relations among latent variables and also among manifest variables. The main raised question is that if this measuring model is an adequate one? To answer this question, the X^2 statistics and other factors of model fitness have to be examined using the structural equation model and path analysis by applying AMOS software. Using the planned questionnaire results, the knowledge management variables, strategic human resource management and the organizational performance were applied as the latent variables. Moreover, error in variables which represents all effective factors other than latent variables were also taken into consideration. In this model, variables are called as follows (table 1):

Table 1: variables of the research

The Error variable	The variable	Its name in the model
-	Knowledge management	**KM**
e13	Strategic human resource management	**SM**
e14	Firm performance	**FP**

We also consider the variables which using them knowledge management, strategic human resource management and firm performance can be specified. We also attribute an Error

measurement variable to each variable which are as follows in our model (table 2):

Table 2: an Error measurement variable to each variable

The Error variable	The Variable	Its name in the model
e5	schooling	**schooling**
e4	Knowledge creation	**creation**
e3	Sharing knowledge	**sharing**
e2	Using knowledge	**using**
e1	Saving knowledge	**saving**
e6	Human resource provision	**Human resources**
e7	Education	**Education**
e8	Performance evaluation	**Performance evaluation**
e9	Service bonus	**service bonuses**
e10	Employee participation	**Employee participation**
e11	Efficacy	**Efficiency**
e12	Effectiveness	**Effectiveness**

3. Results

We first need to determine constant and free parameters to be able to estimate the model. Constant parameters in a structural equation model often include weighted regression of the Error variables. In addition, for any latent variable, one of the weighted regressions has been considered as a constant value which equals to 1. This is a reference to determine the variable and also to solve the problem that latent variables do not have any indicator.

As the investigation of structural relations among latent variables is logical and meaningful when latent structure measurement is acceptable based on practical factors, we will investigate the whole model test after making sure that the

present measurement model in the modified structural equation is acceptable.

3.1 Confirming the model

In this study, we used three types of indices to ensure that the model is acceptable. Absolute fit indices (the indices which are obtained based on the differences between the manifest variance and covariance on one hand and predicted variance and covariance on the other hand), comparative fit indices (indices which are measured based on the comparison between the formulated model and a base model). Now we explain each one of the indices, which are considered for the acceptability of the model (table 3).

Table 3 Confirmation of model results

Indices	The index name	Abbreviation	The acceptable fitness	Fitness of the research model	Result
Absolute fit indices	Chi-Square distribution	Chi-Square	-	237,341	-
	Goodness of fit index	GFI	>0.9	0.902	Relatively Acceptable
	Adjusted goodness of fit index	AGFI	>0.9	0.850	Acceptable

comparative fit indices	Non-normed fit index	NNFI	>0.9	0.798	Acceptable
	Normed fit index	NFI	>0.9	0.755	Acceptable
	Comparative fit index	CFI	>0.9	0.812	Acceptable
	Relative fit index	RFI	>0.9	0.709	Acceptable
	Increasing fit index	IFI	0-1	0.814	Acceptable
Parsimony fit indices	Parsimony normed fit index	PNFI	>0.5	0.599	Relatively Acceptable
	Root mean square error of approximation	RMSEA	<0.1	0.1	Acceptable
	Normed chi-square	CMIN	1 - 5	4.654	Acceptable

Research model in this thesis according the hypothesis and proposed method, has been demonstrated in figure 1.
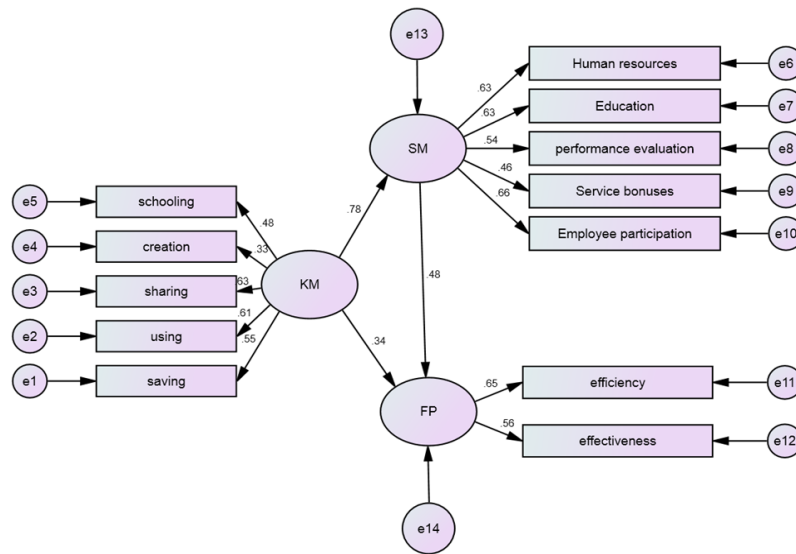

Figure 1: research model

When P<0.05 it means that the relation is meaningful. According to the fact that in the weighted regression table, the P is less than 0.001 for the effect of knowledge management on the strategic human resource management, and it is 0.004 for the effect of knowledge management on the firm performance, and also the effect strategic human resource management on the firm performance is 0.004, it can be concluded that all three hypotheses (1, 2 and 3) are confirmed.

Moreover, the 4th hypothesis was investigated which says strategic human resource management has a positive and meaningful effect on the relation between knowledge management and organizational performance. The direct relation of knowledge management and firm performance is 0.34 and the indirect effect of knowledge management through strategic human resource management is 0.48 * 0.78. The value of the indirect effect was estimated to be 0.37. The total effect of knowledge management on firm performance obtained from the sum of direct and indirect effects was 0.71, therefore the 4th research hypothesis was also confirmed.

Table 4 Results of research model and interaction of factors

	Impact factor	Standard deviation	C.R.	Meaningfulness level	Result
SM<---KM	0.78	0.124	7.142	***	Accepted
FP<---KM	0.34	0.199	2.058	0.040	Accepted
FP<---SM	0.48	0.173	2.885	0.004	Accepted

4 Conclusion

The present research was conducted to investigate the intermediary effect of strategic human resource management on the relation between knowledge management and performance of the firms in Aras free-trade zone. The first finding obtained from this study was that knowledge management has a positive and meaningful effect on organizational performance. The outcome of this hypothesis is in line with the studies some other researchers such as Daniel & Garrigos (2006) and Rehman Asghar (2015) have done. Knowledge management also had a positive and meaningful effect on strategic human resource management. This finding is in line with the finding of Chen & Huang (2009). Furthermore, according to this research 3rd

hypothesis, strategic human resource management influences performance of the firms existed in this research population. The finding of Collins & Clark (2003) supports this. According to the 4th hypothesis, the intermediary effect of strategic human resource management on the relation between the knowledge management and performance of firms in Aras free-trade zone was confirmed based on the obtained results. Sanchez et al (2015) have found the same results.

Considering the above-mentioned results, it can be concluded that nowadays organizations need to apply knowledge to develop and make progress in their performance. In this regard knowledge management is the factor organizations need to apply. The application will turn into a system. However, there are some challenges and opportunities in this way which can support the development of knowledge management. Therefore, in the future only those organizations will be successful that are able to internalize and manage knowledge.

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