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The Effect of Knowledge Management on Employee Self-Efficacy and Empowerment with The Mediating Role of Entrepreneurial Awareness

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ABSTRACT

The purpose of this study is to investigate the effect of knowledge management on self-efficacy and employee empowerment with the mediating role of entrepreneurial awareness. Therefore, the present study is applied research in terms of its purpose and uses a descriptive-survey method in terms of data collection. The statistical population of the present study is 312 employees of the regional electricity department of Fars province. In order to determine the sample size, the Cochran formula was used. According to this formula and the number of the statistical population, the sample size was determined to be 173 people. Face validity was used to measure the validity of the questionnaire, and Cronbach's alpha coefficient was used to measure the reliability. Also, due to the non-normality of the data, Smart PLS3 software based on the structural equation modeling method based on partial least squares was used to test the hypotheses and measure the relationships. According to the analysis of the research data, it can be stated that knowledge management has a positive and significant effect on self-efficacy, employee empowerment, and entrepreneurial awareness. Also, entrepreneurial awareness has a positive and significant effect on self-efficacy and employee empowerment.

KEWWORDS: Knowledge management, self-efficacy, employee empowerment, entrepreneurial awareness.

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1. Introduction

Knowledge is recognized as an important strategic resource and is considered a source for creating sustainable competitive advantage. Knowledge is the processing of information that occurs in the human mind, which is related to facts, processes, concepts, interpretations, ideas, observations and judgments. Knowledge sharing is a process in which an individual provides his expertise, insight or perceptions to another person in a way that enables the recipient to do his job better. In the last decade, with the development of virtual communities in developed countries, knowledge sharing has become the core of continuous improvement of processes and is considered as a principle for transforming the improvement of the individual learning process into real learning (Shayste et al., 2023). Knowledge management in today's organizations living in the information age is considered one of the key factors and competitive advantages that can ensure the survival and survival of organizations. However, the knowledge that must be shared so that the principle of knowledge management can be spread and implemented in the organization is in the hands of employees who consider knowledge to be power and are not willing to easily provide it to others. Therefore, it can be said that knowledge management is a complex process and its effective implementation requires a deep and clear understanding of the factors that affect the knowledge management process. In fact, the key to understanding the success and failure of knowledge management in an organization is to recognize and create the appropriate conditions and context for the

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effective implementation of knowledge management processes (Sadeghi et al., 2023). Among these various infrastructures required for effective knowledge management actions; humanities and social sciences play a vital and decisive role. In this regard, it should be noted that in the current complex work environment, the success of the organization has become a major challenge. Organizational success depends on various factors, one of which is the empowerment of employees. Therefore, the goals of the organization in the absence of empowerment for the work assigned to employees, lead to a lack of independent decision-making and a decrease in independence (Khan et al., 2023). In fact, empowerment is a new and effective technique for improving the productivity of employees' abilities (Salimi et al., 2023). Achieving and maintaining a dominant position in the market, in a wide range of organizations and different industries, has become increasingly difficult due to the growth of competition on the one hand and the increase in customer expectations on the other (Lee et al., 2010). Another factor related to each individual's job is believing in their abilities and strengths. It can be said that self-efficacy is an important factor for the successful performance of a task and the basic skills necessary to perform it. Self-efficacy refers to an individual's beliefs or judgments about their abilities to perform tasks and responsibilities (Yarifard, 2019). On the other hand, entrepreneurial intelligence can be defined as an individual's ability to collect, transfer and select information that leads to potential business opportunities and profit. In a much simpler way, it can be said that entrepreneurial intelligence is actually the ability to understand and see things that others are unable to see. The fact is that creating a new business is not exclusively an economic process, but rather has a close relationship with the surrounding business environment, and people in different environments make different entrepreneurial decisions and, in interaction with the environment, recognize a specific situation as an opportunity. On the other hand, the behavior of people is based on their individual values and beliefs, personality traits and their unique capital (human, social and financial). Such a context shapes individuals' inclinations and capabilities and is known as "entrepreneurial awareness" (Meegon Puri et al., 2014). Given the undeniable impact that proper knowledge management can have on employee empowerment, this article evaluates the impact of knowledge management on employee self-efficacy and empowerment with the mediating role of entrepreneurial awareness, and the conceptual model of the research is as follows.

2. Theoretical foundations and research background

Knowledge management is an organized process for identifying, creating, storing, sharing, and effectively using knowledge to improve organizational performance (Nonaka et al., 1995). Self-efficacy refers to an individual’s belief in their ability to successfully complete a task or cope with challenges. This concept influences the behavior, motivation, and performance of individuals in different environments (Bandura, 1997).Employee empowerment refers to the process of increasing individuals’ freedom, agency, and responsibility in decision-making. This process increases motivation, organizational commitment, and productivity (Preiser, 1995). Entrepreneurial awareness is the ability of an individual to identify new economic opportunities without the need for active search. This concept is one of the key characteristics of successful entrepreneurs in recognizing and exploiting opportunities (Krisner,1997). Therefore, based on the theoretical foundations and definitions above, it can be said that knowledge management is the basis for promoting tacit and explicit knowledge in employees, which leads to increased self-efficacy and their sense of empowerment. Also, entrepreneurial awareness as a cognitive construct can play a mediating role between knowledge management and two output variables (self-efficacy and empowerment).As a result, employees who have higher entrepreneurial awareness are able to better identify learning and innovation opportunities and apply knowledge more effectively in practice.Beekzadeh and Mokhtari (2024) conducted a study titled "A Structural Model of the Effect of Entrepreneurial Thinking on Collective Efficacy Mediated by the Propensity to Cooperate". The results show that entrepreneurial thinking along with positive organizational behavior through collective cooperation improves team efficiency. Mazaheri Nazarifar (2024) conducted a study titled "Approaches to Innovation and Employee Empowerment in Organizations" to examine the relationship between competency development, autonomy, and organizational culture. The results show that effective employee empowerment increases innovation and competitive advantage. Salimi, Nasiri Khozani, and Nazarian (2023) studied the mediating role of ethical climate in a study titled "The Effect of Knowledge Management on Empowerment and Self-Efficacy of Physical Education Teachers". The results showed that knowledge management has a significant effect on self-efficacy and empowerment. Shayesteh, Ahmadi, and Mansouri (2023) studied the relationship between knowledge management and entrepreneurial self-efficacy with the mediating role of entrepreneurial leadership. The findings confirmed the positive relationship between the variables.Sadeghi, Khandan, and Naqshineh (2023), in examining the effect of knowledge management components on psychological empowerment, concluded that knowledge management plays a key role in increasing the psychological empowerment of employees.Khan et al. (2023), in this study, the role of knowledge sharing and creative self-efficacy on individual leadership and innovative behavior was examined. The results confirmed the positive effect of knowledge management on empowerment and innovation.Li et al. (2010), a classic article on the importance of knowledge management in promoting the competitiveness of organizations. They introduced knowledge management as one of the main factors of empowerment.Chen (1998), in the field of structural equation modeling, introduced R^2 levels to evaluate the predictive

power of the model, which has been used in many studies, including your study. Considering the issues raised and the background of the research, the conceptual model was designed as follows:

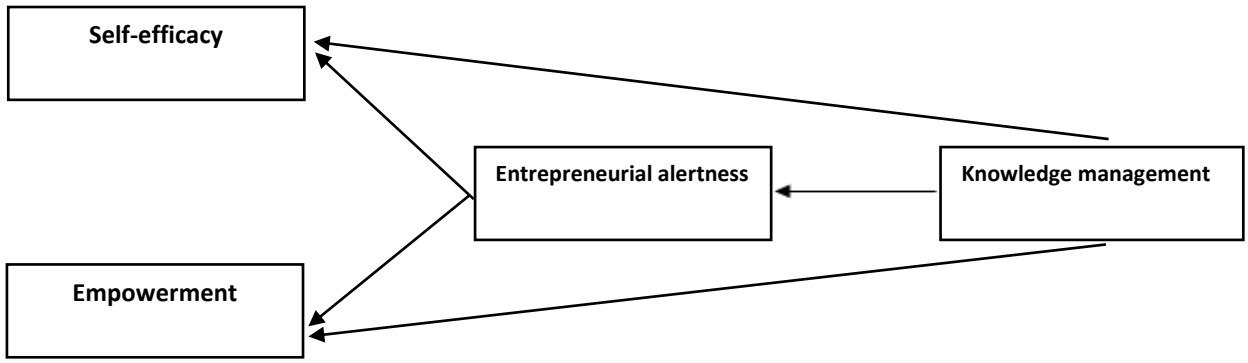


Figure 1: Conceptual research model

Therefore, according to the research model, the main hypothesis was designed as follows: self-efficacy and empowerment have a significant effect on knowledge management with respect to the moderating role of entrepreneurial awareness.

3. Materials and Methods

The present study is an applied study in terms of its purpose and a descriptive-survey study in terms of data collection. The statistical population of the present study is 312 employees of the regional electricity department of Fars province. In order to determine the sample size, the Cochran formula was used. According to this formula and the number of the statistical population, the sample size was determined to be 173 people. In order to distribute the questionnaire among the sample members, a simple random method was used. The library method was used to collect the information required for compiling theoretical literature and the field method was used to collect data. The data collection tool was a questionnaire with researcher-made questions, the summary of which is given in Table (1). The questions were measured on a five-point Likert scale (from completely agree to completely disagree). The validity of the research questionnaire was measured in two parts: face validity (after preparing the questions, the questionnaires were sent to the supervisor and several university professors in the field under study, and with the opinions of these professors, the appearance of the questionnaires and the questions used in terms of writing were revised and finalized). The reliability of the questionnaire was also measured with Cronbach's alpha coefficient, the values of which are given in Table (1) and are confirmed. Data analysis was carried out in two parts: descriptive and inferential statistics. Descriptive statistics describe the demographic characteristics of the statistical sample, and in relation to inferential statistics, the structural equation modeling (SEM) technique and the partial least squares (PLS) method were used to test the hypotheses and model fit. Structural equation modeling was used to examine the relationships between research variables. The analyses were performed using SPSS and SmartPLS3 software.

Table 1: Structure of the research questionnaire and reliability and validity values

Variable	Number of questions	Cronbach's alpha coefficient	Combined reliability	AVE
Knowledge management	7	0.821	0.842	0.720
Self-efficacy	5	0.714	0.793	0.735
Empowerment	6	0.798	0.810	0.706
Entrepreneurial alertness	3	0.818	0.736	0.722

The Cronbach's alpha coefficient for the factors under study is greater than 70 percent, so the factors under study in the study have acceptable reliability and there is no need to remove any questions.

5. Results

The results of the demographic analysis were analyzed in three sections: gender, age, and education. The frequency distribution of respondents to the questionnaire questions based on gender showed that 120 respondents were male and 53 were female. The frequency distribution of respondents to the questionnaire questions based on age showed that 51 people, equivalent to 29.5 percent of the respondents, were between 25 and 35 years old, 112 people, equivalent to 64.7 percent, were 36 to 45 years old, 9 people, equivalent to 5.2 percent, were 45 to 55 years old, and 1 person, equivalent to 0.6 percent, were 56 years old and above. The frequency distribution of respondents to the questionnaire questions based on education showed that 28 people had a high school diploma or lower, 62 had a bachelor's degree, 75 had a master's degree, and 8 had a doctorate or higher. This means that 16.2 percent of the respondents had a high school diploma or lower, 35.8 percent had a bachelor's degree, 43.8 percent had a master's degree, and 4.6 percent had a doctorate or higher.Inferential analysis was conducted in two parts: measurement model assessment and structural model assessment. In this section, before performing statistical tests and due to the assumption of using or not using parametric or nonparametric tests, the Kolmogorov-Smirnov test was used.

Table 2: Results of the Kolmogorov-Smirnov test

	Knowledge management	Self-efficacy	Empowerment	Entrepreneurial alertness
Test statistic	0.218	0.198	0.201	0.187
Significance level	0.000	0.000	0.000	0.000

In the column where the significance of the Kolmogorov-Smirnov test is given, it is observed that all variables have a significance level lower than 0.05. Therefore, it can be said that the research variables are not normal and therefore, to examine the hypotheses, we can use non-parametric tests such as Spearman.

Table 3: Correlation analysis of research variables

	Knowledge management	Self-efficacy	Empowerment	Entrepreneurial alertness
Knowledge management	1.000	-	-	-
Self-efficacy	0.613	1.000	-	-
Empowerment	0.628	0.679	1.000	-
Entrepreneurial alertness	0.553	0.412	0.825	1.000

The correlation coefficient in the table above shows that there is a positive correlation between the research variables. The measurement model was fitted in two parts: reliability and construct validity, as follows: Construct reliability: It is evaluated by measuring three criteria: factor loading, Cronbach's alpha, and composite reliability (Davari and Rezazadeh, 2013). Each is explained below. Factor loadings: The factor loading values are given in Table (4) and are confirmed as being above 0.4.

Table 4: Factor load values

Saying	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Load factor	0.905	0.957	0.899	0.948	0.917	0.911	0.601
Saying	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Load factor	0.835	0.577	0.742	0.470	0.808	0.865	0.810
Saying	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Load factor	0.938	0.833	0.761	0.794	0.594	0.905	0.845

Construct validity: Construct validity is measured by two criteria: convergent validity and divergent validity. Convergent validity: Table (4) shows the average value of the extracted variance from the output of the SmartPLS software for each of the research variables. Since all values are higher than 0.4; therefore, convergent validity is established. Divergent validity: Divergent validity was examined using the Fornell and Larker method. For this purpose, the Fornell and Larker matrix for this study is given in Table (5). Considering the numbers in this table (correlation between the constructs and the AVE root) and since the AVE root values (the numbers in the main diameter) are greater than their underlying values, the divergent validity of the constructs is also confirmed by the Fornell and Larker criterion.

Table 5: Divergent validity values

	Knowledge management	Self-efficacy	Empowerment	Entrepreneurial alertness
Knowledge management	0.852	-	-	-
Self-efficacy	0.781	0.867	-	-
Empowerment	0.813	0.730	0.670	-
Entrepreneurial alertness	0.698	0.709	0.633	0.769

Structural model fit: Structural model fit is measured by the criteria of significance coefficient T (T-Value), coefficient of determination (R2), and path coefficient. Significance coefficient: The values of the significance coefficients are shown in Figure (2). As is clear from the figure, the effect of knowledge management on self-efficacy and empowerment; and the effect of entrepreneurial awareness on self-efficacy and empowerment are also confirmed.

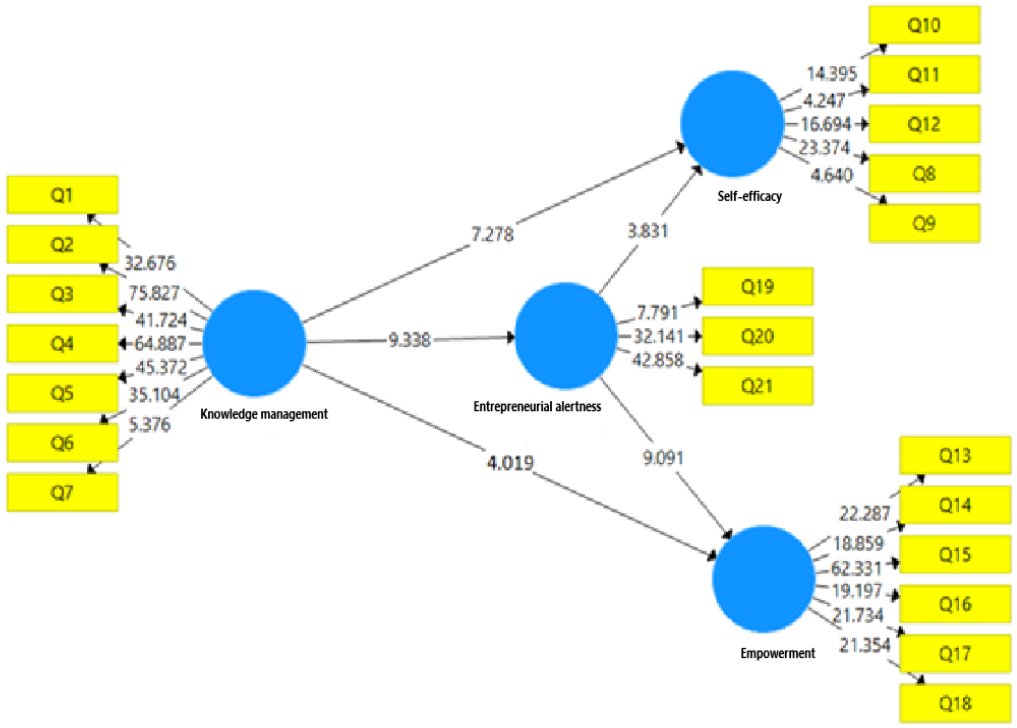


Figure 2: Graphical model of the research (showing the significance coefficient)

Coefficient of explanation: The higher the value of the coefficient of explanation related to the endogenous constructs of a model, the better the model fits. Chen (1998) introduces three values of 0.19, 0.33, and 0.67 as the criterion values for weak, medium, and strong values of the coefficient of explanation; therefore, the weak, medium, and strong fit of the structural part of the model is determined by the criterion of the coefficient of explanation. Table (6) shows the values of the coefficient of determination.

Table 6: Coefficient of determination values

Variable	Self-efficacy	Empowerment	Entrepreneurial alertness
Coefficient of determination	0.783	0.628	0.412

Path coefficient: After examining the significance of the two direct and indirect effects, it is now time to examine the magnitude of these effects. Significance coefficients examine the path between variables but do not indicate how much of the variation in the dependent variable is explained by the independent variable. For this purpose, standardized factor loading coefficients are used. Figure (3) shows the path coefficients for testing the hypotheses.

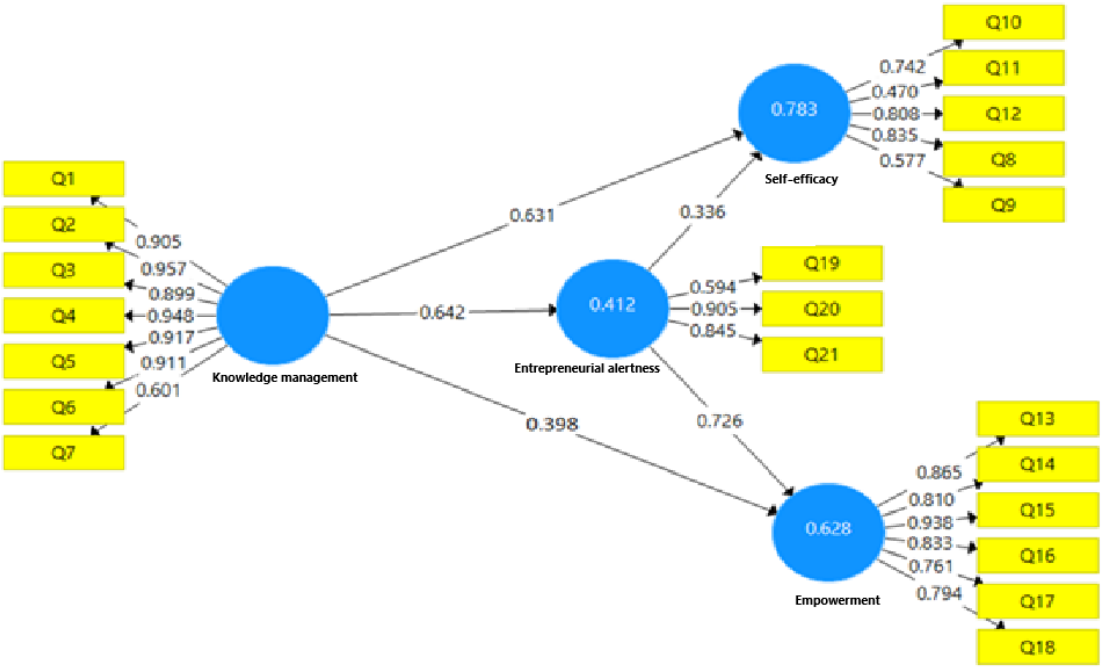


Figure 3: Graphical research model (showing path coefficient and coefficient of determination)

Table 7: Results of testing research hypotheses

Result	Meaningfulness	Path coefficient	Research hypothesis
Confirmation	7.278	0.631	Knowledge management has a positive and significant effect on self-efficacy.
Confirmation	4.019	0.398	Knowledge management has a positive and significant impact on empowerment.
Confirmation	9.338	0.642	Knowledge management has a positive and significant effect on entrepreneurial awareness.
Confirmation	3.831	0.336	Entrepreneurial awareness has a positive and significant effect on self-efficacy.
Confirmation	9.091	0.726	Entrepreneurial awareness has a positive and significant impact on empowerment.

Using the Sharpe Ratios we determined earlier, we calculated the CUSUM for each mutual fund (Faust, 2010). The process was as follows: The index fund was used as a zero. Now, if a fund outperformed the index by 5%, we gave it a score of +1. If it underperformed by the same margin, it scored -1. To get the CUSUM values, we simply aggregated these +1s and -1s by sum.

5. Discussion

The findings from the analyses showed that, by confirming its hypotheses, it provides a clear picture of the impact of knowledge management on employee empowerment. The findings show that knowledge management not only directly increases the self-efficacy and empowerment of employees, but also deepens this effect by strengthening entrepreneurial awareness. In other words, organizations that consider knowledge management as a key strategy provide the basis for the growth and prosperity of their employees by creating a suitable platform for the exchange and sharing of knowledge. This leads to increased self-confidence, the ability to identify opportunities, creativity and innovation in employees and ultimately leads to a sustainable competitive advantage for the organization. As a result, this research emphasizes that investing in knowledge management and strengthening entrepreneurial awareness is an essential step towards employee empowerment and the success of organizations in today's dynamic world. In summary, the findings showed that: Knowledge management directly and positively affects employee self-efficacy and

empowerment. This means that organizations that pay attention to knowledge management as a key strategy can witness an increase in the self-confidence and ability of their employees to perform their tasks and responsibilities. Entrepreneurial awareness plays an important mediating role in this relationship. In other words, by strengthening entrepreneurial awareness in employees, knowledge management creates the basis for increasing their self-efficacy and empowerment. Employees who have high entrepreneurial awareness identify opportunities better, show more creativity and innovation, and as a result, feel more empowered. The positive and significant relationship between entrepreneurial awareness and employee self-efficacy and empowerment indicates the importance of this characteristic in employee success. Organizations can strengthen entrepreneurial awareness in their employees by creating appropriate platforms and benefit from its benefits. Overall, this research shows that knowledge management, entrepreneurial awareness, self-efficacy, and employee empowerment are interconnected and related concepts that can play an important role in the success of organizations. Organizations can achieve sustainable competitive advantage by investing in these areas.

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