Agricultural Marketing and Commercialization Journal
5(1), 32-42, 2021, ISSN Print: 2676640X, ISSN online: 2676-7570

Comparison of Knowledge Management and Intellectual Capital in Islamic Azad and Payame Noor Universities of Kerman Province

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Abstract

The present study aims to investigate and compare the status of knowledge management and intellectual capital in Islamic Azad and Payame Noor universities in Kerman province. The present study is based on descriptive assumptions and is a survey study in terms of method. The statistical population of the study includes all professors and faculty members of Payame Noor University and the Islamic Azad University of Kerman Branch. Sampling was by the stratified method. To analyze data, Statistical formulas of t and the mean difference of t and Levene's test were performed using SPSS software. To collect the required data, two researcher-made questionnaires were used. To determine the validity, the content validity method was used, so that the validity of the questionnaire of factors related to intellectual capital was 88% and the knowledge management questionnaire was 88% and to measure reliability using Cronbach's alpha, the reliability value for intellectual capital questionnaires was 96% and knowledge management was 95%. Findings from the t-test showed that there is no difference between knowledge management and intellectual capital in Islamic Azad and Payame Noor universities in Kerman province.

Keywords: Intellectual Capital, Knowledge Management, Payame Noor University, Islamic Azad University, Kerman.

Introduction

Today is the period of revolutions and according to Toffler; it is a period of power shift. The discussion of intellectual capital management and intangible assets of organizations after the issue of re-engineering and total quality management as an important phenomenon t has comprehensively affected the horizon of management developments. Among these, the latest paradigm that covers the above discussion in the management of organizations is the discussion of intellectual capital management. Stuart believes that intellectual capital is the set of knowledge, information, intellectual property, experience, competition, and organizational learning that can be used to create wealth. The intellectual capital of all employees includes organizational knowledge and its ability to create added value and creates continuous competitive resources (Pradana et al., 2015). Therefore, intellectual capital

seeks to be given more attention in organizations, intellectual assets, knowledge, experience, and organizational learning to achieve comprehensive development. Although many people believe that just technology implies development, knowledge and its sharing in organizations and human capital guarantee improved performance and development. "We are entering a society in which important resources are no longer financial capital, natural resources, labor, and the main source will be intellectual capital," says Drucker, a well-known management thinker. In connection with knowledge management, various definitions and categories are presented, including Snowden's (2002) theory, which considers knowledge management as identification, optimization, and active management of intellectual capital. (Pradana et al., 2015) also defined knowledge management as an emphasis on doing the right thing instead of doing the right thing and considered it as a framework in which all organizational processes are based on knowledge management. According to the definition of the American Center for Quality and Productivity, knowledge management is a strategy aimed at providing the right knowledge to the right person at the right time (Sarrafzadeh, 2011).

Statement of the Problem

Knowledge management in universities identifies knowledge so that low-value and duplicate resources are refined and useful information is passed on to users. In universities, moving towards knowledge systems (knowledge management) causes the university to gain its real place in the exchange of knowledge and the process of cognitive development of the world community so that effective, meaningful, and directional survival of universities depends on the knowledge-based movements (Ebrahimi & Sarbazi Azad, 2017). The problems and challenges in universities have made university management a complex task. Today's administrators must take the path of change and strive to move the university toward the desired situation. Therefore, today the management of universities is the management of change (Ismailpour et al., 2017). To succeed in this, managers must first know what they need to change and where they need to go. In this regard, the use of knowledge management is a good tool. Managers must see the problems, obtain the necessary information about activities and needs, understand the relationship between problems and needs and information, and use the opportunities and facilities to provide solutions to meet the needs (Barzinpour & Sabaei, 2016). Therefore, according to the presuppositions in society, the main question of the research is whether there is a difference between knowledge management and intellectual capital in Islamic Azad universities and Payame Noor in Kerman province.

Research Purposes

1. Recognizing and describing the status of knowledge management and comparing it in two groups of the research community.
2. Recognizing and describing the status of intellectual capital and comparing it in two groups of the research community.

Theoretical Foundations of Research

According to (Feijoo Héctor et al., 2015), intellectual capital is an elusive entity, but

when it is discovered and used, it creates a new resource for the organization to be able to compete and win in the environment. (Perrott Bruce, 2007) considers intellectual capital as the difference between a company's market values and its book value. They are knowledge-based resources that improve the company's competitive advantage (Abbasi & Goldi Siddiqi, 2011).
According to (Mouritsen & Larsen Heine, 2005), intellectual capital is things like employees, customers, knowledge, and managerial work. (Bavakkhani, 2017) presents intellectual capital in a more comprehensive context. This framework includes the following categories in IC:

-Market assets (including services and product brand and customer loyalty)

-Intellectual assets (including royalties, secret formulas, etc.)

-Human-centered assets (including training, work knowledge, professional characteristics, etc.)

- Infrastructure assets (management philosophy, the culture of participation, network systems, etc.) (Merlo Tereza, 2016).

Intellectual capital consists of all knowledge-based assets that distinguish between organizational factors (human resources and communications) and infrastructures (virtual and physical). Intellectual capital serves as a framework for discovering and observing the share of the real value of intangible assets in the organization's life cycle, or other words, the conversion of knowledge into value. Intellectual capital acts as a unique resource and capabilities of the organization to create added value and maintain market position (Toghyani, 2010). One of the models presented in the field of intellectual capital is the (Feijoo Héctor et al., 2015). In 1998, following his previous theories, (Haji Karimi & Mansoorian, 2013) considered intellectual capital to consist of three components: structural capital, human capital, and relational capital (customer).

1. Structural capital: Structural capital is related to the mechanism and structure of a business unit and can help employees in optimal intellectual performance and thus the organization will be able to improve its performance. In other words, structural capital is the knowledge that remains in the organization at the end of each working day, belongs to the whole organization, can be reproduced and shared with others.
2. Human capital: Human capital refers to the capabilities, skills, and expertise of organizational members. The most important indicators of human capital are professional competence of key employees, education, experience, number of people in the company related to the previous field, and also the accurate distribution of responsibilities in relation to customers.
3. Customer Capital: Customer or relational capital includes external dependencies such as customer loyalty, good reputation, and the company's relationship with its resource suppliers. This is defined by the value a customer receives from doing business with the organization. Customer capital includes items such as the value of the concessions owned by the company, its relationship with people and related organizations, market share, retention or loss rate of customers, as well as net profitability per customer (Miklosik & Zak, 2015).

In relation to knowledge management, various definitions and categories are presented, including Snowden's (2002) theory, which considers knowledge

management as identification, optimization, and active management of intellectual capital. (Floyde et al., 2013) also defined knowledge management as an emphasis on doing the right thing instead of doing the thing right and considered it as a framework in which all organizational processes are based on knowledge management. According to the definition of the American Center for Quality and Productivity, knowledge management is a strategy aimed at providing the right knowledge to the right person at the right time (Sarrafzadeh, 2011).

Furthermore, knowledge management based on Lawson (2003) model includes the following dimensions:

Knowledge creation: This refers to the ability to learn and create communication (Mallick Debasish & Chaudhury, 2000).

Knowledge absorption: the processes by which the desired knowledge is provided to the organization; for example, an organization that hires several skilled people in the field of product design has acquired the knowledge of these people (Lapiņa et al., 2014). Knowledge organization: It is the description and organization of the content, features, and objectives of documents in a way that is accessible to those who are looking for these documents or the messages contained in them. Knowledge organization includes activities such as document description, indexing, and classification in libraries, databases, archives, and so on (Lapiņa et al., 2014).

Knowledge storage: As the second required element of knowledge management, through which, the ability of organized storage is provided, and it allows the fast search of information, access to information for other employees, and effective knowledge sharing (Allama & Sheikh Abu Masudi, 2016).

Knowledge dissemination: This process helps to develop a collective partnership in which people as partners feel connected and interdependent in pursuing common goals. Knowledge must be easily exchanged in your organization (Fakhri & Talebzadeh, 2011).

(Merlo Tereza, 2016) conducted a study entitled "Factors affecting knowledge management used in entrepreneurial technologies in companies in the southern United States", the results showed that there is a significant difference between the current and favorable conditions of the company in terms of knowledge management.

(Kirsch et al., 2015) conducted a study entitled "A Model for Implementing Industrial Knowledge Sharing to Improve Risk Management Performance", the results showed that based on the structural model, factors such as innovation characteristics, employee characteristics, job characteristics, and organizational factors can be effective for knowledge sharing. Therefore, there is a significant difference between the current and optimal status of knowledge management.

(Lapiņa et al., 2014) has conducted a study entitled "Comparison of Intellectual Capital Indicators in Universities that have implemented a Project to Improve the Quality of Science (Modern University) and universities that have not implemented this project (Traditional University)". He concluded that there is a difference between the indicators of intellectual capital in traditional universities and modern universities.

(Hong et al., 2011) in an article entitled "Knowledge Management and Strategic Change" refers to three close and different areas between strategic change and knowledge management. He understands the role of experience in knowledge management, knowledge transfer within and between organizations, and knowledge internalization of individuals in the system

of organizational memory and interpersonal affairs as three close but different areas of knowledge management and strategic change.
Based on the literature and theories, two hypotheses were tested in this study, which are:

Theories:

1. There is a difference between knowledge management and its components in Islamic Azad universities and Payame Noor universities in Kerman province.
2. There is a difference between intellectual capital and its components in Islamic Azad universities and Payame Noor universities in Kerman province.

Methodology

The present study is "applied" in terms of purpose and "descriptive-survey" in terms of collecting research information. The statistical population of the study is all faculty members of the Islamic Azad and Payame Noor universities in Kerman province, whose number was 747 and 153, respectively, which was calculated separately for Payame Noor University and Islamic Azad University. The number of samples according to Cochran's formula for Islamic Azad universities was 256 people and for Payame Noor University was 110 people which were selected by stratified random sampling method. To collect information, an intellectual capital questionnaire with 22 questions and a validity of 88% and a reliability of 96% and a knowledge management questionnaire with 24 questions and a validity of 88%, and a reliability of 95% were used. In this study, statistical formulas of t, mean difference t, and Levent test were used using SPSS software.

Results

- Study of knowledge and intellectual capital management in Islamic Azad and Payame Noor universities of Kerman province
In terms of knowledge management, there is a difference between Islamic Azad and Payame Noor universities. As it can be seen from the table, the mean and standard deviation of knowledge management for Payame Noor University are equal (2.94 and 0.78) and Azad University (3.00 and 0.80), respectively, considering that the obtained p-value is 0.51 and is greater than the significance level of 0.05, the null hypothesis is not rejected. Therefore, it is concluded that there is no difference between Islamic Azad University and Payame Noor University in terms of knowledge management (Table 1).

Table 1. T-test for Knowledge Management in Payame Noor and Azad Universities

Row		Levene's test		t-test for equality of means						
			p	t	dt	p	Mean difference	The standard deviation of the difference	95% confidence interval	
									Lower bound	Upper bound
Knowledge management	Equality of variance	0.06	0.80	-0.67	364.000	0.51	-0.06	0.09	-0.24	0.12
	Inequality of variance			-0.67	212.70	0.50	-0.06	0.09	-0.24	0.12

Significance at the level of 0.05

In terms of intellectual capital, there is a difference between Islamic Azad and Payame Noor universities.

As can be seen from the table, the mean and standard deviation of intellectual capital for Payame Noor University are equal to (3.04 and 1.02) and for Azad University are equal to (3.00, 0.98), respectively. Considering that the obtained p-value is 0.74, which is greater than the significance level of 0.05, the null hypothesis is not rejected and it is concluded that there is no difference between the Islamic Azad University and Payame Noor University in terms of intellectual capital. Thus, the amount of intellectual capital in Islamic Azad University and Payame Noor University is the same (Table 2).

Table 2. T-test for Intellectual Capital in Payame Noor University and Azad University

Row		Levene's test		t-test for equality of means						
		F	p	t	dt	p	Mean difference	Standard deviation of difference	95% confidence interval	
									Lower bound	Upper bound
Intellectual capital	Equality of variance	0.48	0.49	0.34	364.000	0.74	0.04	0.11	-0.18	0.26
	Inequality of variance			0.33	198.92	0.74	0.04	0.12	-0.19	0.27

Significance at the level of 0.05

Hypothesis 1: There is a difference between knowledge management and its components in Islamic Azad and Payame Noor universities in Kerman province (Table 3).

Agricultural Marketing and Commercialization Journal
5(1), 32-42, 2021, ISSN Print: 2676640X, ISSN online: 2676-7570

Table 3. Comparison of Knowledge Management and its Dimensions in Payame Noor and Azad Universities

Row		Levene's test		t-test for equality of means						
		F	p	t	dt	p	Mean difference	Standard deviation of difference	95% confidence interval	
									Lower bound	Upper bound
Knowledge management	Equality of variance		0.22	-0.07	364.000	0.94	-0.01	0.13	-0.26	0.25
	Inequality of variance			-0.07	218.39	0.94	-0.01	0.13	-0.26	0.24
Knowledge absorption	Equality of variance		0.54	-1.36	364.000	0.17	-0.18	0.13	-0.44	0.08
	Inequality of variance	1.54		-1.33	195.45	0.19	-0.18	0.14	-0.45	0.09
Knowledge organization	Equality of variance	0.93	0.34	-0.75	364.000	0.45	-0.10	0.14	-0.37	0.17
	Inequality of variance			-0.76	214.58	0.45	-0.10	0.13	-0.37	0.16
Knowledge storage	Equality of variance	1.04	0.31	-0.53	364.00	0.59	-0.07	0.13	-0.33	0.19
	Inequality of variance			-0.54	215.95	0.59	-0.07	0.13	-0.33	0.19
Knowledge dissemination	Equality of variance	0.90	0.34	-0.07	364.00	0.95	-0.01	0.12	-0.26	0.24
	Inequality of variance			-0.06	195.37	0.95	-0.01	0.13	-0.27	0.25
Knowledge application	Equality of variance	0.41	0.52	0.08	364.00	0.94	0.01	0.13	-0.25	0.27
	Inequality of variance			0.08	200.24	0.94	0..01	0.12	-0.25	0.27

Significance at the level of 0.05

The calculated t about knowledge management and its components shows that knowledge management and its components in Islamic Azad and Payame Noor universities of Kerman province are not significantly different and the amount of knowledge management with its components is the same in the research community.

Hypothesis 2: There is a difference between intellectual capital and its components in Islamic Azad and Payame Noor universities in Kerman province (Table 4).

Table 4. Comparison of Intellectual Capital and its Dimensions in Payame Noor and Azad Universities

Row		Levene's test		t-test for equality of means						
		F	p	t	dt	p	Mean difference	Standard deviation of difference	95% confidence interval	
									Lower bound	Upper bound
Structural capital	Equality of variance	5.09	0.02	0.22	364.00	0.82	0.03	0.14	-0.25	0.31
	Inequality of variance			0.21	188.64	0.83	0.03	0.15	-0.26	0.32
Human capital	Equality of variance	0.09	0.77	0.71	364.00	0.48	0.10	0.14	-0.18	0.38
	Inequality of variance			0.71	208.02	0.48	0.10	0.14	-0.18	0.38
Customer capital	Equality of variance	0.98	0.32	-0.22	364.00	0.82	-0.03	0.14	-0.31	0.25
	Inequality of variance			-0.23	217.29	0.82	-0.03	0.14	-0.30	0.24

Significance at the 0.05 level

The calculated t about intellectual capital and its components shows that there is no significant difference between intellectual capital and its components in Islamic Azad and Payame Noor universities of Kerman province and the amount of intellectual capital is the same as its components in the research community.

Discussion

The results showed that there is no difference between intellectual capital and its dimensions and knowledge management with its components in Islamic Azad and Payame Noor universities in Kerman province. This finding is consistent with the findings of (Habersam et al., 2013), (Floyde et al., 2013), and (Farzin et al., 2014). The rapid development of technology has also fundamentally changed the growth pattern of the global economy. Because of these developments, knowledge, as the most important asset, has replaced financial and physical capital in the global economy. The basis and integration of information technology system, staff, business processes, and equipment, within a coordinated and flexible organization, is to respond quickly to events and changes in the environment. Since intellectual capital includes intangible assets, but gradually creates wealth for organizations, then it leads to an increase in the use of technology (Delen et al., 2013).

The existence of intellectual capital and knowledge management is vital for the organization. These two complement each other due to the important overlaps between them. This overlap largely depends on the plans and priorities of the organization. Knowledge management plays an important role in the development and productivity of intellectual capital and focuses on facilitating and managing knowledge-based activities to create a knowledge-friendly environment for intellectual capital growth. Increasing intellectual capital by linking it to knowledge management is possible when existing knowledge processes are managed

systematically and purposefully. To have a systematic approach to knowledge management, we must look beyond the traditional boundaries of the management domain and consider the types of factors that are effective in identifying intellectual capital and its components and activities related to the implementation of knowledge management (Chen & Liang, 2011).

The management of intellectual power is at the center of the contemporary knowledge age. The development of methods for measuring intellectual capital is slow and research in this area has been very limited. Most of the existing methodologies for measuring intangible assets and intellectual capital are based on research in the fields of economics, management, human resource accounting, social sciences, etc. The result of this process has been the achievement of some frameworks, methodologies, and models of measurement that can be used to develop the capabilities of economic sectors to measure knowledge assets. The purpose of this study was to review these patterns to discover concepts that are relevant to the service sector. Furthermore, with the help of the concepts of latent research variables, we were able to show how we should prepare an index for these variables, and in evaluating the indicators, we once again showed the importance of factor analysis. Following such studies, we must show that in organizations with a high level of intellectual capital, high value-added services, organizational learning, and protection and provision of information at the level of organizational knowledge must be very strong. Analysts and researchers should also seek to formulate this type of capital. Due to the implicit concept of intellectual capital, analysts are not allowed to measure it using economic variables. This could be a warning to financial and accounting experts looking for an answer to the question: What is the value of our intellectual capital, a formula that has never existed (Avali et al., 2017).

Conclusion

Given that in recent years, following the privatization policies of some organizations in the service sector of the country have been transferred to the private sector or are being transferred, measuring intellectual capital on organizational performance in this sector, can also evaluate the results of such policies. In this article, we tried to provide a comprehensive framework to link recent research and theories about knowledge management and human capital to analyze the knowledge in human capital, and finally, this capital is a combination of two dimensions of strategic value and uniqueness. However, the organization should manage all its collections and system of human capital, because the achievement of organizational goals is possible through the process of activities of these types of human capital. For this purpose, it was pointed out that for different types of human capital, different systems of human resources are needed and the use of one system reduces productivity. Besides, organizations should pay attention to other types of knowledge such as social capital and organizational capital. Therefore, researchers need to research how to combine different knowledge in the organization (human, social and organizational) to achieve competitive advantage. In the new economic environment, organizations compete in a complex and dynamic environment that the uniqueness and value-added of knowledge in the organization creates competitive strategies in this environment.

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