

The Effect of Nonaka and Takeuchi Knowledge Management Cycle on Organizational Performance from the Perspective of Organizational Commitment: by Using a Case Study of an Organization with a Bureaucratic Culture

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ABSTRACT

Purpose: Organizational commitment can impact significantly on the success or failure of knowledge management activities. According to theoretical arguments, knowledge management is considered as an important factor, which is capable of enhancing the performance of organizations. Since organizational culture dramatically influences on the organizational commitment and knowledge management, organizational cultures have been taken into consideration in the current study. In this research, the relationship between organizational commitment and organizational performance has been evaluated by special consideration of the effect of the knowledge conversion cycle.

Design/methodology/approach: A descriptive-survey method was implemented in this study. In order to obtain sufficient information, interviews, questionnaires, added to the statistical-analytical techniques were employed. In this research, the Cameron and Quinn questionnaire (organizational culture assessment instrument, OCAI) was prepared and distributed. According to the type of industry and size of organization, organizational culture was reviewed in three bureaucratic organizations. Based on the results of the questionnaires and the short interviews conducted with staff, the bureaucratic culture of the organization was analyzed. It should be added that the sample included 188 employees and the questionnaire contained 29 questions. In addition, the questionnaire reliability coefficients were assessed by Cronbach's alpha coefficients and the questionnaire validity was confirmed with KM experts. Knowledge management measurement can be performed based on four levels of the Nonaka and Takeuchi model, namely socialization, externalization, combination, and internalization.

Findings: the results showed that the organizational commitment among workers can affect the cycle of knowledge management and organizational performance. Therefore, high level of commitment can provide better knowledge sharing and higher organizational performance. From other findings related to the role of bureaucratic culture and the dimensions of knowledge management, it can be stated that the low mean of socialization, internalization, and externalization is evident in the bureaucratic culture. Research limitations/implications: This research investigated the relationship between organizational commitment and knowledge conversion and their effect on the corporate performance in an organization with bureaucratic culture. It is apparent that different organizations in different countries have different cultures. Therefore, future research study could extend this study to other countries in the world with different cultures.

Practical implications: If the organization can benefit from an appropriate culture, it will be highly likely to provide a learning environment for employees. In such an organization, knowledge workers will have a high level of organizational commitment and feel comfortable with the culture and as a result, they could find appropriate ways to improve the corporate performance.

Originality/value: This study presents a conceptual framework to show the effectiveness of knowledge conversion and organizational commitment in order to evaluate the organizational performance in bureaucratic cultures. The results show that in a bureaucratic culture, employees generally have a low level of commitment to the organization. The findings indicate that in such organizations, the combination approach is highly recommended. Moreover, it was confirmed that there is a significant relationship between organizational commitment and knowledge management with organizational performance.

Keywords: Organizational commitment, knowledge conversion, bureaucratic culture, organizational performance

Introduction

The rapid development of information technology has increased the importance of knowledge in economic systems [1, 2]. This importance has provided a new atmosphere in which the traditional economic factors are not be considered as necessary elements for the business, and instead, knowledge has become a competitive advantage for organizations [3].

It should be expressed that an effective organizational culture can play as a critical role in various entities. In fact, the organizations with inappropriate cultures will find numerous difficulties and limitations in their daily operations [4, 5]. This study, with regard to the significant influence of the organizational culture on knowledge management, has put effort to stress on the organizational culture as an inevitable factor. It should be mentioned that this study has been performed only in the organizations with bureaucratic culture. There exist many researches with regard to the effect of organizational commitment on the human behavior, but the studies on the effects of organizational commitment on knowledge management activities are very scarce. Some of these studies show the positive effect of organizational commitment on knowledge management in the organization. Robertson & Hammersley (2000) found that there is a positive attitude towards knowledge sharing among different employees in knowledge-based organizations. They also realized that the staffs with high job satisfaction are committed to their organization. Thus, it can be comprehended that high level of organizational commitment can be obtained from the positive attitudes of employees towards knowledge sharing. The current study with regard to scientific evidences is related to the direct effect of organizational commitment on the employees' interests to take part in knowledge management activities. Moreover, it has tried to study the impact of the differences in organizational commitment on the dimensions of knowledge conversion [6].

It can be obviously claimed that organizational commitment is useful only when the commitment has a positive effect on the organizational performance and productivity. Therefore, this study has investigated the relationship between these three chief factors. Storey and Quintas (2000) argued that trust, motivation, and commitment of the staff are the key issues pertaining to knowledge sharing [7].

On the other hand, Chang declared that KM activities are effective in development of the human capacity for knowledge sharing and generation of the creative ideas. In addition, they can enhance the company's financial performance [8]. Moreover, there are few other researches regarding the effect of culture on

knowledge conversion. Thus, one of the goals of this study is to evaluate four dimensions of knowledge conversion in the bureaucratic culture.

Therefore, this study has tried to scrutinize the dimensions of the knowledge conversion, organizational commitment, and organizational performance and afterwards, to analyze the dimensions of knowledge conversion and organizational commitment in bureaucratic culture.

Literature review

1. Organizational commitment

In another definition, organizational commitment is introduced as a concept, which leads to recognize the identity. This identity can be created through involving individuals in the organization [9].

Several studies have been conducted with respect to the organizational commitment. "Muday" (1979) expressed a concept called "attitudinal commitment". Others such as "Muller" and "Price" (1986) introduced the concept of "behavioral commitment". Another approach was introduced by "Alan" and "Mir" (1991), which emphasized on following three concepts [10]:

- An effective commitment is defined as an emotional attachment to the organization.
- The related costs for leaving the organization are defined as a continuous commitment, which is the sign of financial dependency to the organization.
- The adherence to remain in the organization is known as normative commitment [11].

2. Organizational cultures

Ferraro (1998) defined organizational culture as a set of activities that community members do in their daily operations or at least, think about them [12]. Such an organizational culture can strongly impact on the organizational structure, procedures, the monitoring and controlling [13]. It can be also stated that organizational culture constitutes the behavioral principles as well as the methods shaped by public beliefs [14].

By using two aspects, Quinn (1999) provided four categories for organizational culture. One aspect regards about the flexibility and dynamism against the stability, order, and control. The other one represents the controlling orientation inside and outside the organization. Having considered this classification, Quinn introduced four categories for culture, including tribunal, adhocracy, bureaucracy, and market culture.

Market culture is result oriented and mainly emphasizes on a genuine realization of the objectives. Adhocracy creates a dynamic and entrepreneurial environment, which stimulates innovations in the organization. Tribunal culture creates a warm and friendly environment, while bureaucratic culture refers to an organizational structure that is focused on monitoring of the employees' actions [15].

It is worthwhile to state that these four organizational cultures treat differently with their internal information [16]. According to the findings of the organizational culture questionnaire and the conducted interviews in the studied organizations, their organizational culture was determined as bureaucratic.

3. Knowledge conversion

Nonaka and Takeuchi model is one of the proposed models. They believe that there are two types of knowledge in organizations: implicit (tacit) and explicit knowledge. According to their claims, there are four major states of knowledge conversion as follow. The transformation of implicit knowledge into explicit knowledge is called externalization. Internalization includes the transformation of explicit knowledge into implicit knowledge that can be performed through action learning. Combination is the transformation of dispersed explicit knowledge into integrated explicit knowledge. It helps to move from individual explicit knowledge towards collective explicit knowledge [13, 17]. Socialization includes the transformation of implicit knowledge into implicit knowledge. It is established through making closer relations amongst individuals and thus, the implicit knowledge can be enriched [17, 18, 20].

4. Organizational performance

Kaplan and Norton stated that traditional accounting measures such as ROI¹, EPS² may deviate organizations from continuous improvement and innovation [20, 21]. Some researchers have confirmed

¹ - Return on investment

this fact that non-financial measures such as customers, investors, and shareholders have found it increasingly important that the emphasis on short-term indicators such as cash flow, turnover, profit, and prices, is an unsuitable approach [22].

In other words, the mere attention to tangible and short-term factors is inefficient without considering the intangible and non-financial factors. As result, Malts et al. (2003) introduced 5 indexes to evaluate the organizations' performance, which are financial evaluation, market and customer evaluation, process evaluation, evaluation of human resources, and improvement of other activities [23]. Therefore, this study has sought to evaluate the organization's performance using these five factors and the questionnaire.

4. Organizational commitment and organizational performance

Rashid et al. (2003) expressed that organizational culture and organizational commitment are two factors affecting the financial performance of an organization. Wright and his colleagues declared in their research in a same field that both organizational commitment and human resource processes are significantly related to the criteria such as quality, gross profit, and the operating and productivity expenses of the organization. Benkhoff (1997) showed that organizational commitment notably impacts on the financial success of an organization [24].

In general, one of the areas that can intensify the growth and development process among organizations is about the acceptable reputation of an organization in its community. It can be mentioned that committed workforce are the best players for preparation of this issue [25].

5. Knowledge conversion process and organizational performance

Knowledge conversion is a social process, in which people with different knowledge sources communicate with each other, and as a result, create a new knowledge base and this leads to quantitative and qualitative growth of implicit and explicit knowledge [26]. The researches by scholars and practitioners in the field of knowledge management have emphasized on this fact that the science plays an important role to increase the corporate performance of an organization [27]. Therefore, the organizations who are trying to manage their knowledge effectively are well-aware of this fact that improving their organizational performance is the primary motivating reason to obtain an effective knowledge management framework. In this situation, the professional knowledge such as skills, innovative abilities, and creativity can be considered as the important assets that can improve the organizational performance.

On the whole, organizations are managing their knowledge through the process of creation, restructuring, propagation, coordination. In the meantime, many other researchers have tried to measure the portion of knowledge sharing in the performance improvement using different methods.

Chang (2005) claimed that KM activities are effective in development of the capacity of human resources for knowledge-based interactions and in generation of innovative ideas in order to innovate for the organization, and thereby to enhance the company's financial performance [28]. Sawa and his colleagues announced that the description and explanation of the knowledge works could offer innovative outputs such as discovering new technologies or methods for creation or development of new products or processes. They also pointed out that many types of knowledge are directly linked to the competitiveness and financial performance [29].

The studies by Lee in 2007 showed that the knowledge base of an organization is considered increasingly as a basic factor in the company's performance. In other words, it can be assumed that these organizations can become successful by suitable knowledge transformation and taking appropriate management measures to enhance their organizational performance [30].

6. Organizational commitment and knowledge management

It is worth to note that the relationship between organizational commitment and knowledge management that emphasizes on the development of intellectual and knowledge capital is one of the main HRM practices. Moreover, the maintenance, development, and deployment of this knowledge are largely contingent on committed workers [31].

On the other side, Story suggested that creation of a motivating sense, trust, loyalty, and commitment is a key issue among KM workers [32]. This subject is of course expectable, because committed individuals

² - Earning per share

are usually more willing to put their efforts and share their knowledge. The basic model presented in this study is shown in figure 1.

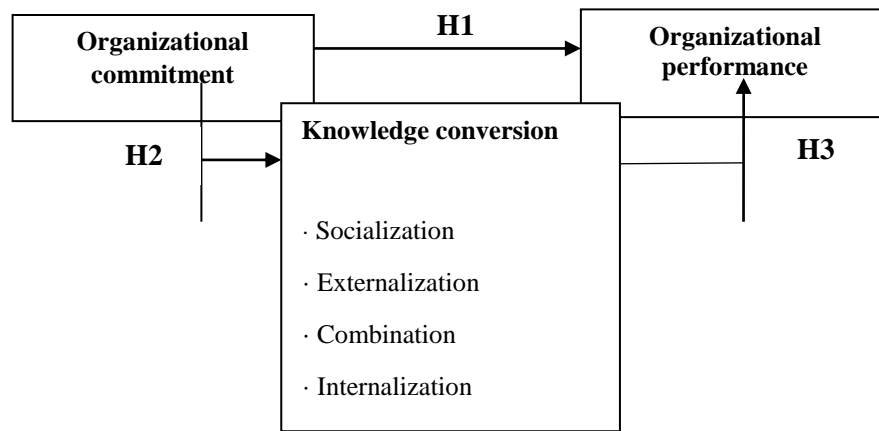


Figure1. The research model

Methodology

1. Measurement

By utilizing the knowledge, expertise, and experiences of wide range professionals from different fields (fields such as power, mechanics, chemistry, materials), and from different positions (including management, technical, and so on), it was realized that the studied companies were engaged in various projects with diverse topics. In such organizations (especially due to their broadness), considerable amount of knowledge is generated during the implementation of the projects. A significant portion of such knowledge has been recorded in documents, reports, softwares, recipes, etc., and the rest is kept hidden in the people's minds and unfortunately, with a lower chance of being transferred and reutilized as invisible knowledge in the format of experiences, relations, skills, visions, etc. The improper application of the generated knowledge for increasing the organizational capital can waste the budgets, which reflects the inefficiency of an organization's approach. On the other hand, since intangible knowledge is hidden in the people's minds, leaving the organization (for any reason) would lead to lose the knowledge. KM systems should be created in such an atmosphere and aimed at influencing on the identification, generation, stocking, reviving, transferring, and utilizing the required valuable knowledge in the organization. Inappropriate utilization of the generated knowledge for intellectual and knowledge capitals in an organization can waste the investments, which shows the unproductivity of solutions in industries. It can undoubtedly impact on the organizational performance directly. In this study, both interview and questionnaire were employed. The questionnaire had 5 parts and included demographic information, questions about organizational culture, knowledge conversion questions, organizational performance questions, and questions about organizational commitment. The interviews were carried out with workers to identify the dominant organizational culture. It became evident to us that the dominant culture was bureaucratic, and it should be expressed that there were questions in the questionnaire intended to ensure that type of culture. The questions on the commitment, knowledge conversion, and organizational performance were selected based on the Likert scale (five items). The validity was proven by surveying the experts, and the reliability was obtained with Cronbach's alpha (equivalent to 0.86), which is acceptable. The dimensions of each of the three sections are as below:

- The questions related to knowledge conversion assessment, organizational culture, organizational performance, and organizational commitment.

The questions about demographic information, including experience, employment title, age, education, and gender. The participants were selected based on their knowledge's common characteristics, and they were chosen from educated people in the organizations. Some of the partakers were from assistants, directors, administrators of organizations, and the others included managers such as HR managers and the experts in the KM and R&D fields. Data collection was conducted in the fall and winter of 2011. Since this study is concerned with the knowledge management in the organizations with bureaucratic cultures, at the beginning, Quinn organizational culture questionnaires were distributed in five organizations. It was speculated that the culture is bureaucratic. Then, based on the results of the questionnaires and short interviews with workers of these organizations, it was revealed that their dominant culture of the three organizations is bureaucratic. Afterwards, the relationship between organizational commitment, knowledge sharing, and organizational performance was evaluated after distributing 188 questionnaires. Questionnaires were distributed according to Cochran formula. In addition, the dimensions of knowledge sharing and organizational commitment in a bureaucratic culture were studied using the same tests. It should be stated that in this research, we tried to examine the relationship between other components and thus, the status of knowledge conversion and organizational commitment was evaluated. The questionnaire on organizational commitment was extracted from the work of Linz in 2003 [33]. It consists of 7 items, which measures the individuals' commitment and permits each person to score a maximum of 35. The scores above 25 indicate high organizational commitment, while the scores between 15 and 25 are the average commitment, and the scores below 15 indicate that the organizational commitment is low. The results show that 38 percent of the people had low organizational commitment, 46% had medium, and 16 percent of the employees had a high level of organizational commitment. It is worth to mention that the knowledge conversion questionnaire has been used in numerous papers [12, 34]. In addition, Maltz questionnaire was employed to assess the organizational performance. This questionnaires has been applied in many papers [20, 34, 35]. The reliability for organizational commitment questionnaire, knowledge conversion questionnaire, and organizational performance questionnaire were properly acceptable, with a minimum alpha of 0.70.

2. Data collection and analysis

Table 1 shows the sociological situation of the respondents, according to the results obtained from 188 participants.

Table 1: The sociological status of respondents

Row	Index	Status
1	Gender	(50%) male, (50%) female
2	Age	(30%) below 30 years old, (38%) 30-35 years old, (22%) 35-40 years old, (10%) more than 40 years old
3	Education	(8%) post-diploma degree, (55%) B.A, (27%) M.A, (10%) PhD
4	Occupation	(51%) experts, (38%) supervisors, (10%) deputies, (5%) managers
5	Work experience	(48%) less than five years, (27%) 5-10 years, (22%) 10-15 years, (3%) more than 15 years

Result verification

1. Evaluation of four dimensions of knowledge conversion in the bureaucratic organizational culture

According to the results in table 2, it can be observed that the average of three dimensions of knowledge transformation is less than 3 with 95% confidence, while the option 3 is a v option in the questionnaire. The condition in three dimensions of "socialization", "internalization", and "externalization" shows that the average of these 3 dimensions is less than 3 (with probability of 95%). It indicates the weakness of these three dimensions in bureaucratic cultures. While the mean of the "combination" dimension is higher than 3 with 95% confidence, that shows that the bureaucratic culture is in good condition for combination.

Table 2: The mean of knowledge conversion

Knowledge conversion	Influence factors	The 95% confidence interval of the difference	
	Socialization	2.34	2.93
	Externalization	2.36	2.99
	Combination	3.86	4.59
	Internalization	2.19	3.09

2. The relationship between organizational commitment and organizational performance

Hypothesis 1: The differences in the level of organizational commitment of workers affect the organizational performance.

According to the literature review, organizational commitment has a significant impact on the organizational performance. Therefore, this study has attempted to put this relationship into the test by one way ANOVA analysis. The results of this test implied that the organizational commitment affects the organizational performance. This claim is acceptable with regard to the significance of 0.019. In other words, organizational commitment influences on different levels of organizational performance. Having compared the results of Scheffe's tests, it was disclosed that there is a difference between the effects of different levels of organizational commitment on the organizational performance. The findings confirmed that low level of commitment among workers notably reduces the performance. Moreover, the results demonstrated a tremendous difference between low and high levels of organizational commitment, in terms of the organizational performance, which was confirmed by the significance levels of the results. The outputs of this section are shown in tables 3.

Table 3: The Scheffe's multiple comparison procedure

(I) commitment	(J) commitment	Mean difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Low	Medium	-.8776*	.26120	.005	-1.5568	-.2423
	High	-1.2654*	.25003	.001	-1.8885	-.5943
Medium	Low	.8126*	.26130	.005	.2213	1.5228
	High	-.3879	.23402	.309	-.9568	.2451
High	Low	1.2114*	.25113	.001	.5453	1.8545
	Medium	.3659	.23122	.311	-.2487	.9312

3. The relationship between organizational commitment and knowledge conversion

Hypothesis 2

Table 4: The Scheffe's multiple comparison procedure

(I) commitment	(J) commitment	Mean difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Low	Medium	-1.0265*	.30386	.005	-1.7844	-.2686
	High	-1.5004*	.29602	.000	-2.2388	-.7620
Medium	Low	1.0265*	.30386	.005	.2686	1.7844
	High	-.4739	.26992	.220	-1.1472	.1993
High	Low	1.5004*	.29602	.000	.7620	2.2388
	High	.4739	.26992	.220	-.1993	1.1472

The differences in the level of organizational commitment affect the knowledge conversion. In this section, the one-way ANOVA test was employed to examine this relationship. The results showed that organizational commitment effects on the knowledge transformation in organizations. This claim is acceptable with regard to the significance level. the significance level is 0.030.

The results in table 6 show that the higher the level of organizational commitment is, the higher the interest and knowledge will be. Furthermore, the results also exposed that individuals with moderate levels of organizational commitment had higher performance than those with low level of commitment, and individuals with high levels of organizational commitment were quiet more interested to contribute

their knowledge to their organizations and had more abilities in knowledge transformation than those with low levels of organizational commitment. These findings are displayed in tables 4.

4. The relationship between knowledge conversion and organizational performance

Hypothesis 3

The relationship between knowledge conversion and corporate performance: The following assumptions were made in this study.

H3.1 Corporate performance has a significant correlation with knowledge socialization.

H3.2 Corporate performance has a significant correlation with knowledge externalization.

H3.3 Corporate performance has a significant correlation with knowledge combination.

H3.4 Corporate performance has a significant correlation with knowledge internalization.

According to the results in table 8, it can be concluded that these three dimensions (socialization, combination, and externalization) affect the organizational performance. They achieved the significance levels and the correlation of the results' coefficients confirmed these relationships. In this study, multiple regression analysis was used in order to comprehend this relationship. The multiple regression analysis results are shown in table 8. The positive beta values in table 9 show a model, which is provided as follows:

$$Y = 0.496 x_1 + 0.391 x_2 + 0.017 x_3 + \epsilon$$

Where x_1 in this relationship represents “socialization”, x_2 represents “externalization”, and x_3 represents “combination”. With regard to the results, the entire three factors confirmed their positive effects. The outputs of this test are shown in tables 5 and 6:

Table 5: T-test

		Socialization	Externalization	Combination	Internalization
Performance	Pearson Correlation	.285*	.341**	.228**	.187
	Sig. (2-tailed)	.029	.009	.008	.369
	N	188	188	188	188

Table 6: The multiple regression analysis

Model	Un-standardized coefficients		Standardized coefficients	T	
	B	Std. Error	Beta		
	(Constant)	.509	.371		1.373
	Socialization	.496	.131	.467	4.165
	Externalization	.391	.133	.370	3.154
	Combination	.017	.063	.053	.122

Discussion

In the surveyed industries, the lower average of socialization is considered as a critical problem from the knowledge management perspective. In fact, it indicates that managers are reluctant to share their professional and personal experiences with their organizations. In other words, there is a wrong picture amongst the managers that knowledge sharing leads to missing the knowledge and it prevents knowledge promotion. Overall, in some organizations, the dominant culture directs people to protect their knowledge from being disclosed with others and they attempt to maintain their power in the organization by knowledge ownership and they would not participate in the process of disseminating the ideas, experiences, and knowledge. By making use of the improvements in KM processes through enhancement of the organizational commitment, the surveyed industries can considerably improve their organizational performance and generate impetus in their personnel. If the knowledge can be gathered and systematically organized, it could help the organizations to benefit from their human and financial assets in such a way to respond and resolve their problems by the aid of specialists at the lowest possible time. This procedure can help to record the organizational experiences right after the termination of projects, in order to create and expand the vision, knowledge, capability, and creativity of managers and staff. In fact, by acquisition of such understanding, the organizational productivity can be improved eminently through enforcing the documentation of various criteria about the efficiency, effectiveness, and execution of projects. That will

enrich the experiences, help the members to learn from others' past experiences, and create organizational synergy to promote the employees. Based on the analysis of the collected questionnaires, it was revealed that the level of organizational commitment in bureaucratic cultures was unsatisfactory. Because only about 16% of the workers of these organizations had high organizational commitment and the organizational commitment of approximately 84% were low or moderate. This can be due to the fact that the dominant organizational culture is generally flowed in the entire aspects of an organization and its wide effects on employees' activities is unavoidable. In fact, the organizational culture can influence on the style of perception, thinking, feeling, valuing, and assuming in each member's mind, and it consequently motivates or undermines their organizational commitment. From other findings related to the role of bureaucratic culture and the dimensions of knowledge management, it can be stated that the low mean of socialization, internalization, and externalization is evident in the bureaucratic culture. Since socialization can be usually performed through close connections between members in a team, the weaknesses of this dimension in the bureaucratic culture might negatively affect the outcomes, because the motivation of workers to share their feelings and experiences is one of the major problems in this culture. On the other hand, due to the dry and fairly inflexible dominant climate of this organizational culture, staffs cannot learn the others' skills only by using their observations. Furthermore, the "combination" had a higher average, indicating its desirable position compared to other three dimensions. This might be due to the presence of strong rules for documentation of the affairs. The results also proved that the higher the level of organizational commitment and loyalty are, the higher the organizational performance will be, and thus, organizations and companies can enhance the level of organizational performance significantly by raising the organizational commitment amongst their employees. Moreover, the direct relationship between these factors is reasonably consistent with scientific evidences. In order to explain the relationship between organizational commitment and knowledge transformation, it can be concluded that commitment affects directly on the interest and ability to participate in the activities related to knowledge management, because the highly committed and loyal individuals show more interests to participate in the activities related to their KM contributions. In the next section, we discuss the relationship between the dimensions of organizational performance and knowledge transformation. The results verified that three dimensions of socialization, combination, and externalization influenced on the organizational performance directly and positively. The outputs from the test also confirm this fact. Finally, the results showed that the organizational commitment among workers can affect the cycle of knowledge management and organizational performance. Therefore, high level of commitment can provide better knowledge sharing and higher organizational performance.

Conclusion

Despite the theoretical evidences regarding the relationship between knowledge management, organizational commitment, and organizational performance, no comprehensive study has been carried out in this area. In this research, the relationship between organizational commitment and organizational performance was studied using statistical methods, such as mean and variance analysis and multivariate regression, with regard to four dimensions of knowledge transformation (socialization, externalization, internalization, and combination). These studies demonstrated that organizational commitment directly affects the organizational performance, and also, organizational commitment can improve the knowledge process. Moreover, three dimensions of knowledge transformation have a direct and positive effect on the organizational performance. According to the findings of this study, it can be pointed out that the average organizational commitment is low in bureaucratic culture, and three dimensions of knowledge management are low in this organizational culture except the combination dimension, which had a reasonable average. In the studied organizations, it was proposed to build the training and cultural grounds as a plausible solution to improve KM activities in such organizations. The obtained results with regard to the relationship between the dimensions of knowledge conversion and organizational performance are nearly similar to Tseng's findings [1]. In his research, Tseng presented the significant relationship between externalization, combination, and internalization and organizational performance. Likewise, the results of this paper on the relationship between organizational bureaucratic culture and

knowledge conversion steps are compatible with Tseng results [34]. She concluded that in organizational bureaucratic culture, socialization does not have a proper situation and it requires to be strengthened by the combination dimension. In a research conducted by Quinn, it was demonstrated that the hierarchical culture has attained lower scores in four steps of knowledge conversion [36].

The results regarding the relationship between knowledge management and organizational performance are similar to the findings of Fazli et al. In the current research, it was verified that improving the related processes of organizational knowledge, which are originally affected by the organizational culture, would yield to organizational performance improvement [37]. Moreover, the investigations by Chin et al. indicated that KM capabilities impact on organizational performance positively and significantly [38]. It is worth to add that the direct impact of KM capabilities on the organizational performance improvement has been confirmed by number of other researches [38-42]. However, it should be stated that Zak et al. (2009) concluded that there is no relationship between KM activities and financial performance of the organization [43]. The obtained results about the relationship between organizational commitment and performance are not in line with Rashid and his co-workers (2003). Rashid et al. concluded in their study that a bureaucratic environment can not influence on the organizational commitment of individuals and also the organization's performance; even though the supportive atmosphere has a positive impact on commitment of the employees [44].

Future research in this field can concentrate to study this subject in other organizations with different organizational behaviors and attitudes. It can investigate the relationship between other types of organizational culture with organizational commitment, knowledge transformation, and organizational performance by using other modeling methods and fuzzy techniques.

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