

Retaining Knowledge, Human, and Intellectual Capital

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Abstract

Knowledge retaining has become a demandable concept that many studies investigated which their findings confirmed its importance to enhance the organizational productivity and performance. In addition, the organizational knowledge contains many aspects including the economic knowledge (i.e., intellectual capital), and the individual skills and experiences (i.e., human capital), where the latter is a component of the first. Although many studies have adopted each concept, few studies have directly linked their relation which the present study aims to provide. Through representing the previous related studies that applied different methodological approaches, the findings confirmed the significant relation between knowledge retaining, intellectual capital, and human capital.

Keywords: knowledge retaining , intellectual capital , human capital

1. Introduction

Knowledge retention has been a critical subject among the business and the organizational sector due to the concern of knowledge loss among the working staff. Caroline Martins and Meyer (2012) confirmed that this type of loss could lead the corporation to a vulnerable level during difficult or competitive economic periods which increased the necessity to comprehend the knowledge retention causes and relations. In 2003, De Long and Davenport justified that knowledge retention may have unprecedented problems as a consequence of several workforce demographical changes including aging, hiring competitiveness, and fast turnover among younger individuals.

Moreover, the need to preserve the expert knowledge has also led the organizations to search for effective ways to retain this knowledge in the minds of their working staff which will enable the learning of past experiences which led to “human capital” that is part of the “intellectual capital.” Also, Marsh and Stock (2006) argue that for translating the knowledge into beneficial actions, the organizational capabilities need to be developed and retained which indicate the relationship between knowledge and human and intellectual capitals.

As such, there is a correlation between the knowledge retention and the organizational human and intellectual capitals, which despite the wide investigations of knowledge retaining, few studies have directly examined it. Therefore, the present study aims to fulfill this gap by reviewing the previous literature and empirical studies to investigate whether the knowledge retention essentially reflects the retention of human and intellectual capital.

2. Knowledge Retaining

Knowledge as De Long and Davenport defined is “the capacity for effective action or decision making in the context of organized activity” (p.21). Therefore, the authors elaborated that the knowledge lost will be the decreasing of this capacity of the effective action within the contextual attributes of an organization. Marsh and Stock (2006) also confirmed the importance of systemic attempts to retain knowledge due to the need to store, maintain, and utilize the knowledge before it declines as Argote et al. (1997) also emphasized who demonstrated the rapid knowledge reduction.

Moreover, Marsh and Stock (2006) explained that explicit knowledge is easier to be transferred and reapplied than tacit knowledge; therefore, the organizations’ procedures to create explicit knowledge including codification, can enhance the knowledge transferring and comprehending. In addition, the activities of knowledge retaining for prior projects depend on the articulation of different opinions and understanding of the activities’ effectiveness and the strategic contexts, as the researchers argued. Ausubel (2012) discussed in his book that knowledge acquisition and retention is not necessarily restricted to the formal contextual factors of a certain organization or school; either formal or in informal. It is, on the contrary, related to the human cognitive structure that relies on the “semantic memory” of a meaningful formal learning procedure.

On the other hand, retaining the knowledge is restricted to timing aspects as Arthur et al. in 1998 has confirmed which highlights that knowledge can only be retained if it is practiced and used. Nevertheless, Ausubel (2012) explained that the related knowledge of this type of learning has long-term and organized memories that associate with several cognitive variables “practices, review, instructional materials, motivational factors, and developmental changes in cognitive capacity to handle verbal abstraction” (p. xi). Also, the book highlights the crucial influence of existed and determined ideas on retaining new knowledge.

For capturing the value of retaining the knowledge may require the reinterpretation of prior experiences that will enable the investigation of strategic changes in organizations (De Long and Davenport, 2003; Marsh and

Stock, 2006). In 1992, Dougherty confirmed that by developing the technological and marketing data, the corporation would be able to retain, preserve, and create the related knowledge. This indicates the knowledge is retaining an association with the previous organizational knowledge.

Marsh and Stock (2006) added the organization knowledge is retaining include the engaging practices that require the working staff to articulate their knowledge and prior outcomes during the organizational developments and productions for overriding future failures. Both Brown and Eisenhardt (1997) and Dougherty et al. (2000) demonstrated that by comprehending the existing knowledge within the firms' strategic context, collaborative strategic ideas and process could be created. As such, it will address the knowledge of the past, present, future, and the transition periods.

Marsh and Stock (2006) have discussed that knowledge is collected by either exploring the previous similar experiences (i.e., internal sources) or integrating the external knowledge that provides new information. However, the scholars argued that knowledge retaining is about storing the prior knowledge of projects' production and developments (i.e., internal sources), which required the employees to reinterpret their individuals' knowledge and outcomes to create a knowledge source for future projects. In other words, organizational members, who are an essential part of the internal organizational source, also consider the asset of knowledge retaining.

3. Intellectual and Human Capital

In 1998, Stewart and Ruckdeschel indicated that the related knowledge to wealth gain would create an intellectual material that has led to the "intellectual capital (IC)" which was first employed in 1985 by Morris Kronfeld and Arthur Rock. The authors explained that this term includes individuals' skills, networks of technological and social aspects and their related software, and the intellectual property. As such, this type of knowledge includes the correlated information to wealth creation and production and excludes other types of knowledge, as the researchers elaborated. In this sense, the book highlights that the knowledge of intellectual capital converts the raw material to be a valuable and profitable source which can be measured by the markets rather than financial accounting.

Martín-de Castro and Verde (2012) added that economic wealth had been derived from the knowledge which they referred to as intellectual capital. The researchers discussed that this term had been defined differently in many studies along the years; "intangible or knowledge assets" or "basic competences, based on knowledge and information, of intangible character that allow creating and maintaining a competitive advantage" (p. 44). Also, Tsui et al. (2014) explained that IC is associated with the resources of organizational and intangible knowledge and assets where the latter covers the innovative knowledge that enable long-term competitive business, thus improving the corporation productivity and effectiveness.

Dalkir and Beaulieu (2017) elaborated in their book that intellectual capital can be determined by the differences between book and business values in the organization by "strategic, tactical, and operational" assets (p.17) (see figure (1)). The authors stated, "Intellectual assets are represented by the sum total of what employees of the organization know and what they know how to do. The value of these knowledge assets is at least equal to the cost of re-creating this knowledge" (p.16). The study mentioned several examples of the intellectual capital. For instance, "Competence" which is a skill that used to accomplish a high performance level, "Capability" that is a critical strategic skill for competencies application and integration, and "Technologies" which is a required method to generate certain physical outcomes.

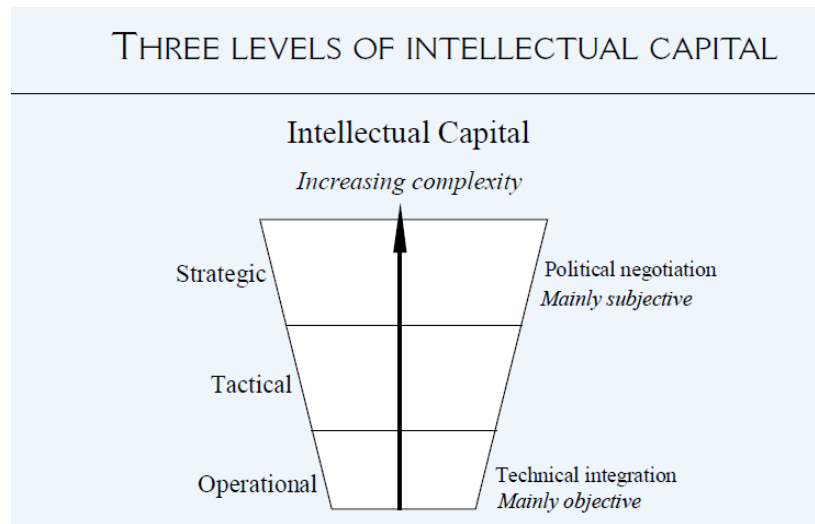


Figure (1): Intellectual capital levels
Source: (Dalkir and Beaulieu, 2017)

Furthermore, IC has become a critical management task that enables data transformation to information for facilitating organizational knowledge generation, as Martín-de Castro and Verde (2012) discussed. The researchers mentioned that literature had defined the intellectual capital with three components which contain “human capital, structural capital, and relational capital” (p.44) while their study s proposed four components; human capital, organizational capital, technological capital, and relational capital. In addition, Tsui et al. (2014) defined them as; human capital, intangible resources, and intellectual property.

For human capital that contains the workforce collective skills, talents, capabilities, and proficiencies (Stewart and Ruckdeschel, 1998). Whereas the skills or talents are related in reality to the individuals, the authors argued that executives in that sense face the challenge to transform the individual assets to the whole team to prevent the overdependent on certain employees who need to be encouraged to share their skills with others. In other words, to make the sharable information, human capital data need to be converted to “structural capital” data that comprises the company proprietary knowledge assets and provide an accessible data source by the use of the knowledge-management procedure.

Human capital as Martín-de Castro and Verde (2012) elaborated refers to the employees’ knowledge and their abilities to create this knowledge which includes “values, attitudes, aptitudes, and know-how” (p. 46). In addition, Schmitt et al. (2012) explained that retaining the knowledge has also been considered as a core component of the organizational memory aspects that allow the firm to implant its knowledge that include human and non-human aspects. As such, the organizational knowledge that retained by its workforce (i.e. human capital) considers the most valuable assets to the advantage of competitiveness.

4. Literature Interrelations and Discussions

Empirical findings by Marsh and Stock (2006) have emphasized the effective role of retaining and interpreting knowledge in enabling the organizations to facilitate their prior experiences in production and product development. Also, the study supported the role of knowledge retention activities in encouraging the working force to articulate the prior generated knowledge. As such, not only that employees enable retaining the knowledge retaining as the previous literature indicated, but also knowledge retention procedures enhance their participation in sorting their experiences and skills.

In other words, human capital can be developed by the knowledge retention methods. Furthermore, the findings also highlighted the critical role of internal knowledge in enhancing the organizational performance since they retain the knowledge that used for the practices of new projects development and operation. The direct relation between the workforce, knowledge retention, and performance practices reflect the correlation between the data retention with human and intellectual capitals where the first represents the working staff experiences and the latter include the economic knowledge.

A study of Yigitcanlar et al. (2007) has shaded the light on encouraging methods of encouraging industrial and developmental knowledge which had an economic base. The researchers suggested a new growth theory that implied the important relationship between the human capital growth and the worker's knowledge in developing the city economy where contextual elements have a considerable impact. Similarly, De Long et al. (2003) indicated that the solutions of enhancing the knowledge retention are derived by the organization strategies on

the business level. Accordingly, the studies emphasized on the association of knowledge retention and enhancing the intellectual capital that encompasses economic and business knowledge.

Knowledge retention contribution factors were investigated by Caroline Martins and Meyer (2012, p.77-90) where the findings resulted in nine effective factors that have been confirmed or indicated by previous studies. Firstly, “knowledge behavior” that addresses the information typology that needs to be retained which depends on the communication effectiveness; sharing and learning, among different working staff. Secondly, “strategy implementation” which concentrates on the procedures that preserve the organizational growth, maintain services and product development, determine positive competitive areas, improve the related trust, and protecting knowledge property. Thirdly, “coaching” that is related to the second factor due to the effective impact in monitoring and assisting the creation of knowledge retention.

Fourthly, “people knowledge loss risks,” identifies the knowledge might be at risk of losing with the concentration of the knowledgeable individuals. Fifthly, “knowledge attitudes and emotions” as an individual factor that encompasses personalities and emotions considerations of collaboration and commitment in order to avoid losing the knowledge. Sixthly, “power play” which combines the group elements and cohesiveness, resolves conflict differences, utilizes external skills and cooperative experts. Seventhly, “knowledge growth and development” that covers individual elements including the enhancing the knowledge retention abilities, encouraging sharing knowledge, increase the individual engagement in developing and learning opportunities.

Eighthly, “performance management,” contains the organizational elements that create part of HR practices in evaluating the performance of sharable knowledge, identifying the individual experts, improving training procedures of the related workforce. Ninthly, “organizational support and encouragement” which combines items on the organizational level that contains cultural, structural, and designed factors. For instance, encouraging and supporting new ideas generation, departments’ cooperation, and individual interaction.

The researchers categorized the first four factors as theoretical aspects while the remaining ones as behavioral on the level of individuals, groups, and organization. Nevertheless, the study indicated the importance of investigating the previous factor with different contexts since contextual factor plays an effective role in retaining the knowledge. Accordingly, the study emphasized that to retain the knowledge, individuals, groups, and organizational aspects need to be addressed. In other words, retaining the knowledge reflect the improvement of organizational economics, and individual knowledge (i.e., intellectual and human capital).

Moreover, in 2013, Kim et al. proposed an integrated theory suggests that knowledge retention is influenced by skills learning methods that need to adopt different learning strategies in the organizational training and coaching programs. As such, the study suggested three learning stages: “declarative,” “mix of declarative and procedural,” and “Mostly or exclusively procedural.” This implies that knowledge retention and acquisition are based on improving the human capital that covers enhancing the individuals’ skills and knowledge as the previous literature discussed.

In 2000, Dougherty et al. resulted in that market, and technological knowledge (i.e., intellectual capital) include skills, means, procedures, and practices (i.e., human capital). The researchers also elaborated that the knowledge of products, economy, organization, and workforce capabilities are linked. Schmitt et al. (2012) concluded that positive relationship between reducing the number of employees with the decreasing the ability for knowledge retention due to the generated lack of human knowledge source. On the other hand, Castaneda and Toulson (2013) confirmed the significant relation between HR individuals and the organizational, economic knowledge where shareable data represents the knowledge management and the intellectual capital significantly. Consequently, neglecting human capital could create a considerable risk that obstacle is retaining the organizational knowledge.

The study indicated that since workforce who are responsible for measuring the HR practices that enhance knowledge sharing and retaining, both workforce and HR practices play an essential role in developing the organizational intellectual capital. Similarly, Tsui et al. (2014) highlighted the role of knowledge retention procedures including reporting and measuring the information on the organizational intellectual capital. Daghfous et al. (2013) had also resulted that organizations mainly depend on their knowledge retaining on the related aspects to their working staff to enhance their technological practices and business capabilities. As such, the study highlighted the importance of retaining human capital rather than top managers. In addition, the researchers concluded that by management practices, financial and incentives knowledge had the fewer efforts for retaining while human capital had the greatest attention.

5. Conclusion

The purpose of this paper to provide a theoretical review to explore the knowledge retaining an association with human and intellectual capital. By representing the previous studies, the direct association can be concluded between knowledge retention, human, and intellectual capitals which has been confirmed on several levels. At first, by enhancing knowledge retention human capital, knowledge of performance and productivity (i.e., intellectual capital) will be promoted and vice versa. Also, since retaining the organizational knowledge required

sharable information, studies suggested the converting of human capital to structural capital which is another component of intellectual capital. In other words, knowledge retention cannot be applied except by intellectual capital while other studies implied that the improvements of organizational economic and individual knowledge are a reflection of retaining the knowledge. These findings indicate the circular impact of the three concepts. As such, retaining the organizational knowledge may reflect retaining both human and intellectual capital.

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