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Knowledge Management And Learning Capability To Enhance Organizational Innovativeness

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Abstract

XXI century is witnessing the rise of innovation and innovativeness as one of the main drivers of industrial competition. Innovation becomes increasingly crucial in creating and maintaining an organization's competitive advantage, as well as its contributions to growth and wealth [i]. In other words innovation itself is a strong competitive strategy to achieve world-class manufacturing and servicing status and compete effectively in global markets [ii]. Learning capabilities of a firm in context of knowledge management are claimed that as one of the main drivers of innovativeness. Even there are some efforts to consider these concepts together; they are mostly studied as separately in today's "management theory jungle". Thus, this paper aims to offer a holistic approach for building organizational innovativeness on the basis of Knowledge Management (KM) and Organizational Learning Capabilities (OLC).

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1. Introduction

According to the claims of the economists, entrepreneurship is considered to be an addiction to the classical factors of production –land, labor and capital- [1], [2]. More recently, knowledge has come to be recognized as distinct from labor, and as a factor of production in its own right. Indeed it is the developing era of Information and Communication Technologies (ICT) since 1980s that results with the rise of the knowledge as a distinct factor of production [3]. Effective use of ICT has enabled the firms to break the supply chain. Thus, the points of resource, design, production and market separate from each other in general, geographically in particular. This situation has forced organizations to develop external relationships and to build strategic partnerships within a complex business network [4].

In this complex business environment, firms have to face the fact that they should be innovative [5]. According to many recent studies, it has been found out that both Knowledge Management (KM) and Organizational Learning (OL) play an important role on organizational innovativeness [6], [7]. Whether the very recent studies try to address the intersection of KM and OL; these two interrelated constructs are

generally studied separately that results with different conceptual models. This conceptual mismatch reveals the lack of a useful management tool which combines knowledge and learning for innovativeness.

In this concept, this paper aims to offer a holistic approach for building organizational innovativeness on the basis of KM and Organizational Learning Capabilities (OLC). To this end, this paper is arranged in three parts. A literature review focusing the concepts of organizational innovativeness, KM and OLC follows this section. Also, the similarities of the concepts of KM and OLC are discussed and a missing link between these concepts is exposed in that section. Finally, the integration of these concepts are set out, and some recommendations to executives to use these concepts together in order to enhance their organization innovativeness.

2. State of the art: The current situation and the way forward

2.1. Drawing on the Existing Literature: Organizational Learning (OL) and Organizational Learning Capability (OLC)

The recognition of market opportunities is very important towards appropriate positioning in order to achieve competitive advantage. Exploiting these opportunities through innovative ways requires specific knowledge, creative activities, and the ability to understand user/customer decision making and practical wisdom [8]. Based on those requirements, the ability to recognize opportunities partly depending on the individual's and organization's learning capabilities and extant knowledge [9]. Learning has been defined as a permanent change in behavior as a result of repetition and experience, leading to the ability to perform tasks better and faster [10]. From a strategic perspective, learning has been considered, as a source for a possible competitive advantage [11], [12], [13]. Although organizational learning has its roots in individual learning [14], [3] and it is important to organizations, organizational learning (OL) is more than simply the sum of each member's learning. OL is seen as a dynamic process based on knowledge, which implies moving among the different levels of action, going from the individual to the group level, and then to the organizational level and back again [15], [16]. In this vein, organizations, unlike individuals, develop and maintain learning systems that not only influence their immediate members, but also they transferred them to others by a way of organization histories and norms (e.g. [17], [18], [19]). It is widely recognized that OL is a complex and multidimensional concept that has been examined through a variety of disciplinary perspectives [20]. OL can be basically described as a set of activities within an organization that facilitates learning of all its members and continuously renovates itself [21]. It is the process of acquiring, distributing, integrating, and creating information and knowledge among organizational members [22], [15]. The processes of learning at organizational level involve key components that support knowledge productivity processes, which include searching for information, assimilating, developing and creating new knowledge on products, processes, and services [23]. If we consider learning as a capability from the resource-based view organizations acquire several benefits from learning and transforming what they have learned into valuable, rare, inimitable, and non-substitutable routine procedures.

The OL literature mainly focuses on the development of normative models for the creation of a learning organization. This literature underlines the importance of organizational learning capability (OLC) [24]. OLC is basically described as a bundle of tangible and intangible resources or skills the firm uses to achieve new forms of competitive advantage [25]. The OLC concept stresses the development of organizational knowledge the importance to create, manage, and evaluate knowledge based assets to accomplish the integration of individual knowledge to the organizational level [26], [27]. Thus it is an imperative to handle management of knowledge based assets delicately within the search for developing a holistic model for OLC.

2.2. The concept of Knowledge Management (KM)

Today’s firms have become much more interested in stimulating knowledge, which is considered as the greatest asset [21]. The growing interest in organizational knowledge has prompted the issue of managing the knowledge to the organization’s benefit as well [28]. Accordingly the concept of Knowledge Management (KM) draws a significant attention and many definitions of KM appear in the extant literature. By considering the following examples, differences may be observed regarding perceptions of scope and emphasis. More specifically, Davenport supports the claim that KM has thus far been addressed at either a philosophical or a technological level, with little pragmatic discussion on how knowledge can be managed and used more effectively on a daily basis [29]. The effective utilization of the organizational knowledge, though, has been identified by Parby and Taylor, as a vehicle which supports innovation, generates new ideas and exploits the organization’s thinking power [30]. Additionally, the process of managing organizational knowledge has been recognized in terms of value creation through organizational intangible assets. In that Malhotra views KM as a regulative principle that is aimed to satisfy and exceed the customer expectations. She also suggests that by providing the right knowledge to the right person(s) at the right time, KM techniques and applications make it possible for firms to design dynamic processes and to exploit their human resources effectively [31]. The latter rationale reveals a latent concept of collective knowledge which is explicitly referred by von Krogh in his argument that KM identified and leverages the collective knowledge in an organization to help this organization to compete [32]. Civi also utilizes the notion of collective knowledge together with the corporate knowledge to describe KM as the process in which firms create and make use of their own aforementioned types of knowledge [33]. In a more holistic point of view proposed by Kebede KM is the creation and management of an environment which encourages knowledge to be created, shared, learnt, enhanced, and organized for the benefit of the organization [34].

2.3. The relation between Knowledge Management and Organizational Learning Capability

KM is a cycle model starting with the entrance of the new knowledge to applying it into organizational processes [7]. Despite the fact that KM and OLC are so important in organizational context, few studies focus on how these two factors relate to each other and affect innovativeness. In fact it is widely recognized that OL is complementary to KM [7]. For example Easterby-Smith and Lyles consider OL to focus on the *process* and KM to focus on the *content* of the knowledge that an organization acquires, creates, processes and eventually uses as a capability to learn [35]. In the search of an integrative approach for OLC and KM, life cycle models appear to be useful tools. Based on the notion that knowledge management is presented as a cycle model starting with the entrance of the new knowledge to applying it into organizational processes, life cycle models address the relationship between KM and OL. There are many KM cycle models that identify the key aspects of KM, ranging from Davenport and Prusak's 3-stage model (“generate, codify/coordinate, transfer”) [36] to Ward and Aurum's 7-stage (“create, acquire, identify, adapt, organize, distribute, apply”) [37]. Indeed these stages of KM cycle models compose the learning process and learning capability at organizational level. OL is complementary to KM. In order to examine the complementarity of this two brotherhood concepts, King et al’s cycle model (“create, acquire, refine, store, transfer, share and use”) among them seems to be the most comprehensive reference model of KM [7].

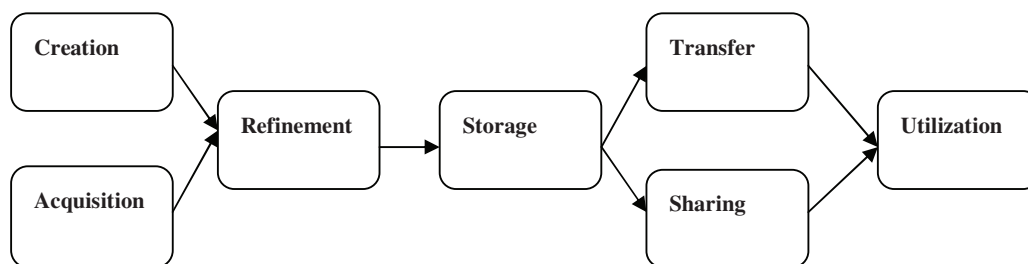


Fig. 1. KM cycle model (King et al., 2008)

The model in Figure 1 shows that the introduction of the KM cycle includes either the creation or the acquisition of knowledge. *Knowledge creation* refers to the development of new knowledge inside the boundary of organization, while *knowledge acquisition* entails the search for, recognition of, and assimilation of new knowledge, from outside organizational boundaries. After the creation or the acquisition of new knowledge KM systems and processes the incoming knowledge should be prepared to transmit it into the organization's memory aiming at maximal long-term reusability. This is what we call *knowledge refinement*. On the following stage, the refined knowledge enters various storage media and becomes a part of the organization's memory. That is to say, organizational memory consists of knowledge stored in the minds of organizational members, held in electronic repositories, can be acquired and/or retained by groups or teams and is embedded either in internal or external relationships as well as in the business's processes, products and services. [38], [7]. In order to have an organizational wide impact, the stored knowledge should be either *transferred* or *shared*. Knowledge transfer and sharing represent two ends of a continuum. Transfer is the purposeful communication of knowledge from a sender to a known receiver while sharing occurs through a repository, to people who are usually unknown to the contributor [39]. The transferred or shared knowledge is then applied into organizational process and practices in order to end to collective and individual learning, and/or collaborative problem solving, and innovation [7].

At this point it is necessary to put emphasis on the term *innovation*. Innovation is extremely dependent on the amount of knowledge available to organizations. Consequently, the complexity created by the explosion of richness and reach of knowledge has to be identified and managed to ensure successful innovation [40], [41], [42], [43], [44]. Although there are many studies supporting the relationships between knowledge management, and innovativeness [6]; there is still a missing link between KM and innovation. This rationale is described on the following section which conceptualizes factors able to affect innovativeness.

2.4. The way foreword: The missing link between KM and innovation

In attempt to identify factors that affecting innovativeness, we reviewed the existing literature on organizational innovation. We saw that many studies have focused on the organizational characteristics (such as organizational structure, organizational size and organizational resource slack), while the others have considered the role of the external environment of an organization. More specifically, researchers who have investigated the OL in terms of the organizational characteristics have mainly statistically proved that the organizational characteristics (i.e. centralization, formalization, specialization, slack resources and organizational size) influence the OL [45]. Other researchers have empirically analyzed relationships concerning the external environment of an organization implying the importance of the external knowledge acquisition [46], [47]. Indeed the assumption that organizational knowledge (i.e. the amounts of knowledge that an organization possesses and continually acquires) influences the innovation process finds theoretical and empirical support in several studies (e.g. [27], [48]; [42], [44]. Specifically, the processes and practices of knowledge management are found to be driving forces for innovation [42], [49].

Generally speaking, organizational knowledge is translated into a core organizational capability for the organizations that are able to use effectively what they know in order to act before their competitors by constructing and managing an innovation portfolio which is hardly possible for competitors to imitate [50], [51], [52], [53]. Hence, it is expected that the management of knowledge and knowledge based assets to be closely related to innovation performance. However the effectively transition of knowledge and intangible asset into organizational wide principles and practices is still a matter of concern. Indeed in KM cycle model, the knowledge that is either shared or transferred is supposed to be ready to use in an innovative manner. But is it really so? How can the transferred or shared knowledge internalized and absorbed to move up to organizational level?

2.5. *The Conceptual Framework*

In order to bridge this gap, OLC seems to be an appropriate answer. Organizations need to learn and absorb their knowledge and knowledge based assets to implement them effectively in new innovative projects [46], [54], [55]. In fact, the capacity to learn has been considered a key of an organization's effectiveness and potential to innovate [26]. For example McKee considers product innovation as an organizational learning process and states that directing the organization towards learning supports innovation effectiveness and efficiency [56]. Wheelwright and Clark suggest that learning takes an important part in new product development projects because it allows new products to be adapted towards new knowledge about changing environmental factors, such as customer demand uncertainty, technological developments or competitive turbulence [57]. Hult et al. finds out that since a firm has been characterized as an innovative performer, management must create and support organizational systems and mechanisms that embody a clear learning orientation and capability [58]. Recently Alegre and Chiva point out that innovation is dependent on the company's capability to learn, through which new knowledge is developed, distributed and utilized or in other words managed [25]. So it is possible to say that since a KM system integrated with an OLC will have a synergistic effect on organizational innovation.

It has already been proved that learning and experiencing of business processes can convert the knowledge and knowledge based assets into permanent organizational knowledge and ultimately innovative practices [59]. In the context of this transition process OLC is divided into two compatible capabilities: the absorptive and the transformative one [60], [61], [24]. Absorptive capability, emphasizes the external element of OLC that refers to the evaluation and utilization knowledge that is externally derived as a function of prior related knowledge i.e an ability to recognize the value of new information, assimilate it, and apply to it to commercial ends [60], [24]. On the other hand transformative capability highlights the internal element, as an ability to choose new knowledge and innovative technologies, maintain them over time, reactivate and synthesize them with ongoing development efforts [61], [24]. Hence, absorptive and transformative capabilities as dimensions of OLC together absorb and transform “the shared and transferred knowledge” and apply it to new product development thus, securing competitive advantage and high production speed. Drawing on the above rationale and aforementioned concepts, we consider OLC to perform the dual role of absorptive and transformative capability in King et al’s cycle model cited earlier on this paper [7]. The proposed KM cycle model in the context of organizational innovation states as follows:

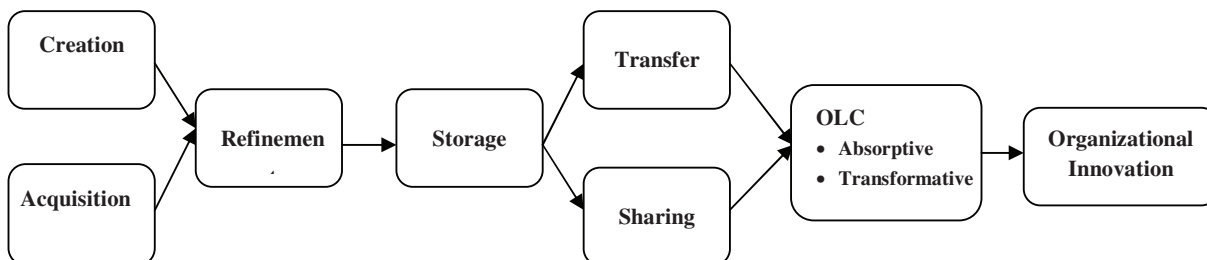


Fig. 2. The Improved KM cycle

More specifically, in the aforementioned proposed KM model, we consider OLC as a complementary component to KM; that bridges the transferred and shared knowledge to organizational innovation by recognizing the value of new information, assimilating it in towards the whole hierarchies, levels and departments, and reactivating and synthesizing them towards ongoing development efforts. Consequently, the knowledge and knowledge based assets are managed and applied into organizational innovation in the context of a KM mechanism which is contributed by the OLC.

3. Concluding remarks

The initial purpose of this paper is to provide a comprehensive presentation and review of the two main concepts of KM and OLC stressing also out their effects on organizational innovativeness. An attempt is also made to integrate them in a holistic approach to give managers a mind of settings in respect to organizational innovativeness. Drawing on previous conceptual and empirical research, we construct a framework reflecting the steps of KM life cycle which is facilitated by OLC with contributions of OLC] in the context of organizational innovation. Knowledge management is presented as a cycle model starting with the entrance of the new knowledge to applying it into organizational processes. By providing the new and important knowledge available to organizations serves as a basis for organizational innovation. Hence, we realize that KM cycle (“create, acquire, refine, store, transfer, share and use of knowledge) plays an important role for a better innovative performance; without underestimating the concept of OL in the relationship between KM and organizational innovation. The processes of learning at organizational level involve key components that support knowledge productivity processes, which include: information searching, assimilating, developing and creating new knowledge on products, processes, and services. Therefore, as an organizational capability OL, is found to be the link between the well organized knowledge and the effective innovative practices and processes. In so doing, organizations which perform OL capability recognize the value of new information, assimilate it towards the whole hierarchies, levels and departments, as well as reactivate and synthesize them towards ongoing development efforts. Consequently, OLC arises as a complementary to KM for achieving innovative goals.

Considering the complementary role of OLC to KM, we redesigned the KM cycle also including the OLC between transfer/share step and knowledge utilization. OLC has now been modified with two new dimensions that of absorptive and transformative capability. This extended KM schema integrates these two brotherhood concepts, in a holistic manner. Thus, from a capability based view, KM represents the *content* of the knowledge that an organization acquires, creates, processes and eventually utilizes whilst OLC focus on the internalization and the effective transition of this knowledge content to the practice.

Our research also provides practical implications for managers and executives. Firstly, management should recognize the value of knowledge and knowledge based entities in order to accomplish organizational innovativeness. Also, management should establish and maintain a KM system in order to ensure the effective processing of the incoming knowledge starting from the implementation of new knowledge into organizational daily routine tasks and activities. Secondly, management should realize the importance of OL in general and OLC in particular due to the fact that innovation is dependent on the company's capability to learn how new knowledge is managed. Moreover, recognizing the importance of learning; management should also invest on improving learning capability towards absorbing and transforming new knowledge and applying it into innovative products, processes and/or services. Thirdly, in order to take the advantage of these two brotherhood concepts -OLC and KM- in a synergistic way; management should consider them in a complementary manner and integrate OLC into the KM system

(especially within the sharing/transferring stage) for effective internalization and utilization of the well-managed knowledge.

A holistic approach for KM and OLC in the context of innovativeness triggers the opportunity for future research. For instance, the integration of KM and OLC within the KM cycle can be extended or an improved schema can be offered. Moreover, taken into consideration the lack of empirical data, empirical investigation can be further contacted based on the interrelations between KM and OLC and their combined impact on organizational innovativeness.

To conclude, this study highlights the important role played by OLC in KM cycle. An attempt is made to bring into open the gap between KM and innovation and fill it with OLC component offering in this way little contribution to the stream of KM. However, there is great need of enriching our conceptual contribution to the field of KM by offering empirical support to our theory building. The improved KM cycle model can encourage researchers to test this model empirically in order to support generalization of our claims.

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