

Attaining Competitive Business Advantage by Knowledge Creation Process with the Mediating Impact of Organizational Learning and Innovation

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Abstract



The study aims to examine the association between the knowledge creation process and attaining competitive business advantage through organizational learning and innovation as mediators. The data were collected through questionnaires. A cross-sectional time horizon was kept in consideration for this research. The respondents of the research were the top and middle-level managers of different companies based in Sheikhpura and Lahore, Punjab, Pakistan. The quantitative research methodology was adopted to analyze the data. In the study, smart-PLS structural equation modeling was used to analyze the research model. The main objective of the study was to examine the effect of organizational learning and Innovation between the knowledge creation process and competitive business advantage. The findings revealed how the knowledge creation process affects the success of businesses. It was also observed that the continuous increase in customer demands has increased the importance of innovation and it has become an indispensable element to gain and attain a competitive business advantage. It was also concluded from the results that organizational learning does not have a significant impact on attaining competitive business advantage however, innovation plays a key role in the knowledge creation process and achieving business advantage.

Keywords: Knowledge Creation Process, Business Advantage, Organization Learning, and Innovation

Introduction

Due to evolving technology, companies these days are facing intense competition. Technological evolution and ever-escalating competition among organizations are creating panic for survival. The survival and business advantage of companies largely depends on how companies innovate and materialize new ideas. One of the sources through which companies may maintain competitive advantage is knowledge creation and organizational learning. Through this companies can adapt themselves to new business strategies. Continuous innovation is one of the major demands of the end-users. Innovation is a key to success and a way to attain a competitive edge. The surroundings in which companies are entrenched are increasingly dynamic (Hollen et al., 2013). Firms are considering continuous innovation as a core point to attain a competitive edge (Knight, 1967). This relation has been strongly endorsed in the past few decades (Damanpour & Aravind, 2012).

The core purpose of this study is to look into how companies can attain a competitive advantage over their rivals and how they can sustain the same. The present study discusses the role of (SECI) model in leading towards competitive advantage. This model of SECI is concerned with the continuous transfer of knowledge as well as the conversion of different sorts of knowledge. This model is considered one of the most dynamic models in the sphere of knowledge. This model was proposed by Nonaka and Takeuchi (1995) and is renowned as the "universal model". Innovation is considered to be critical for the organizations in this model.

The role of KCP is the same as like of catalyst. As this process has a synergy effect. As on one side, it boosts innovation and on the other side, it plays an important role to achieve a competitive edge. Knowing and knowledge has been differentiated and it is proposed that knowledge creation is a

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product of the interaction between them. Since it is inevitable for the companies to stay in the market. This ability to create knowledge is repeatedly reckoned as the essence of the organization's competitive edge. Companies that equip themselves with knowledge and utilize knowledge more efficiently have a propensity to become leaders in the industry. Knowledge creation is the part of knowledge management that also includes knowledge acquisition. Knowledge creation is a factor in the generation of knowledge (Huber, 1991). Previous research suggests a variety of results about the four modes of this variable.

This research also explores the role of organizational learning in attaining a competitive business advantage. Organizational learning and innovation play a major role to act as a bridge between the knowledge creation process and business advantage. Past studies have defined organization learning in different contexts. Huber, (1991) coined it as knowledge attainment. In the present research, Organization learning is taken as a mediator between KCP and companies' advantage. Knowledge generation, its dissemination, and applicability have an affirmative effect on organizational learning and thus, it may be concluded that it has a positive impact in gaining competitive advantage (Castaneda & Rios, 2007).

Moreover, the role of innovation holds much importance for organizations as the market has now become very dynamic. Continuous innovation act as a catalyst to cope with the change of end-users needs and to carry on competitive advantage (Drucker, 1985; Porter, 1986). In this era, the end user's demands are changing drastically hence, to satisfy customers' needs continuous innovation is required. Innovation is not only limited to output rather it is also a nonstop process.

The present research also explores the role of both organizational learning and innovation as mediators to explore their impact on organizations to attain and maintain a competitive edge. According to Porter (1990), competitive advantage and innovation are interrelated with each other. An essential component for gaining a competitive advantage is Organizational learning. The companies that ultimately cater to the needs of their end-users come out as triumphs. The survival of organizations largely depends on the right investment in resources. By doing so businesses will be able to seek, create and exploit new knowledge that will pave the way for naive ideas. Learning leads to exploring a new sphere of knowledge, firms may build innovative products, unmatched services, and new technological strategies to achieve big in the competitive arena (Gunday et al., 2009). In this era of a knowledge world, the upfront confronts the firms are facing is how to lift knowledge efficiency (Drucker, 1993). In addition to this, it has also been emphasized that both implicit and explicit knowledge within the businesses are fundamentally linked to their agility, overall performance, and more importantly innovation. In this context, abandonment of obsolete knowledge, assimilation of new knowledge to innovate is also essential factor for the firm's success (Drucker, 1993). Sankowska (2013) Nonaka (1991), and Nonaka and Takeuchi (1995), argued that acquaintance-oriented firms are far ahead of the less knowledge-oriented companies. The strong alliance among knowledge management and related indicators had been distinguished in latest researches (Kianto et al., 2017; Rupieta & Backes-Gellner, 2017, Chinying Lang, 2004; Oltra, 2005; Soliman & Spooner, 2000, Connel & Voola, 2013; Grandori & Kogut, 2002).

Ramirez and Kumpikaite (2012), implied in their research that development, transfer, and appliance of the acquaintance have a conducive effect on learning that adds to firms' innovative ability. It has been suggested that the "cognitive architecture of knowledge in the companies (how knowledge is constructed, stored, exchanged, transferred, rebuilt) persuades the organizational learning process, which in turn retroacts on firms innovative process" (Cohendet et al., 2003). Organizational learning acts as a catalyst in the knowledge creation process and a company's competitiveness. This century has been going through a tremendous increase in innovation and due to which the industries are facing intense competition. The focus on innovation is triggered due to the demands of end-users. Innovation is considered a strong strategy for creating one of the world's best standards of production and service performance. Innovation is only possible when a favorable environment exists in the organizations.

The most important endeavor of this study was to observe the impact of these variables in organizations in achieving business advantage. These variables are Knowledge creation process (KCP), organizational learning, and innovation that leads towards the competitive business advantage in a market. To test the variables the data were collected from the middle and top managers of different private organizations of two cities of Punjab, Pakistan. The two cities of Punjab were

Sheikhupura and Lahore. The research intended to analyze the relation of the KCP from the standpoint of this model on the company's efficiency and competitive advantage. Organizational learning and innovations acted as mediating variables.

Literature Review and Research Hypotheses

Knowledge Creation Process (KCP)

In this era of a knowledge-oriented economy, the primary ingredient of sustaining a competitive edge is knowledge (Colombelli et al., 2013). The same has been indicated by (Nonaka et al., 1995). It has been pinpointed categorically that the prosperity of organizations falls in the ability to get an advantage from the acquaintance (Svieby, 2000). Nonaka and Takeuchi, (1995) were the first who reckoned the proposal of the knowledge creation process. They have emphasized KCP and termed it as a key factor for the competitiveness and success of the companies. KCP is exceptionally significant for firms to launch new products or business strategies to gain an advantage. This process and in-hand control of significant resources and knowledge could develop a competitive advantage for the companies. Not only the organizations but also employees could make use of the available knowledge to serve the end-users better.

Recent studies imply that a favorable culture and learning environment is important for organizations to succeed (Amankwah-Amoah & Sarpong, 2014; Groysberg & Abrahamas, 2006). Many organizations are depending on cross-functional teams to assimilate knowledge within the organizations (Sarin & McDermott, 2003). According to Grant (1996), a company has to be open towards creating knowledge to compete with the other rival firms (Nonaka, 1994; Nonaka & Takuchi, 1995). As it had been accredited in the literature of the knowledge sphere (Grant, 1996; Nonaka & Konno 1998; Nonaka & Toyama, 2005), the KCP is exclusively imperative for organizations to build up novel things and other policies related to marketing.

The theoretical framework of the present research is based on Nonaka's (1994) theory. This study investigates the process of the creation of knowledge within corporations. Nonaka (1995) implied that the primary reason why Japanese organizations were moving towards innovation was based on the exclusive approach of knowledge creation. Nonaka (1991) closely observed various Japanese companies such as Canton, Masuchuta, and Honda. One common phenomenon of the system of their success was based on their sophisticated method to manage and create new knowledge. Nonaka and Takuchi (1995) in their extension of previous work, maintained the notion that this approach evolved the company competitiveness. Both had discussed this novel experience in their book ' Knowledge-Creating Company'. Four processes of KCP have been accredited by Nonaka (1994). This model has been further bifurcated into two levels. In KCP, interactions take place in two stages. One is a crossing point between two factors to amplify it from individuals to sections and then to firm (explicit and tacit). The first phase indicates the formation of novel tacit knowledge via oblique sharing. This sharing takes place between individuals. It may be created and shared via the social interface between new recruiters and well conversant specialists by imitation, study, and applying (Nonaka, 1991).

Tacit knowledge can be transmitted by the companies through interaction with external clients (Nonaka et al., 2000). Brainstorming sessions also help in the creation of this mode of knowledge through creative discussions and experience sharing. This mode of knowledge resolves many problems and helps in generating novel ideas (Nonaka & Takeuchi, 1995). It is also believed that socialization transfers tacit knowledge held by individuals (Nonaka & Toyama, 2005). The firms may extend the domain of knowledge transfer beyond the boundaries by including customers, suppliers, or even competitors. The next step of the SECI model is externalization. This process refers to the translation of tacit knowledge into explicit knowledge. This process ascends to the group level from the individual perspective. This may take the form of metaphors, analogies, or dialogues and this can assist in eloquent tacit initiatives and form explicit concepts for products (Nonaka & Takeuchi, 1995).

The next phase of the SECI model pertains to merger-related knowledge that creates the latest explicit knowledge to be disseminated among the employees working in the company. It indicates the translation of explicit knowledge achieved inside the company or on the outside of acquired knowledge and may be reflected in action and process. Nonaka and Takeuchi (1995) describe that this course of action may take place via meetings, computerized communications networks, documents, and conversations. The internalization process is the last stage of the SECI model. It is about a change

of knowledge that is explicit knowledge into tacit knowledge. As pointed out by Nonaka and Takeuchi (1995), this phase is concerned with the individuals who gain organizational explicit acquaintance and transfer the same into novel knowledge that is tacit by making it in vogue. The best possible tool for this mode is via reading, training, replication, testing, and the use of manuals related to work assignments and rotations (Nonaka et al., 2000). The use of this procedural manual covered that, the co-workers can convert this explicit knowledge into tacit experiences for other employees. The end of internalization commences a new mode of knowledge creation.

This model is considered as one of the vigorous models in the subject of management of knowledge. Although, some analysts and researchers confront the global applicability of the model as it was developed in the context of Japan (Gibby & Holden, 2003). Since all phase of KCP was developed in the context of Japan thus its generalizability in other countries is still a question unanswered (Glisby & Holden, 2003). The main idea of integrating KCP in the research framework was to fully make use of all the processes. SECI model is based on various grounds. Foremost of that, this is deemed as a knowledge creation process theory that determines the relationship of both explicit and tacit knowledge. This also tenders insight into both knowledge creation and its transfer. Lastly, this SECI model is suitable for current research because it had been put in several studies related to OL and innovative products expansion. This research will open new horizons since it will also analyze the applicability of this model in other countries (Nonaka & Takeuchi, 1995).

Knowledge Creation Process and Competitive Business Advantage

SECI model permits the companies to develop and convert knowledge constantly and dynamically (Nonaka & Konno, 1998; Nonaka et al., 2000). A vibrant theory concerning organizational knowledge creation was given by Nonaka (1995). This theory says that knowledge is created through a consistent exchange of ideas of explicit and tacit knowledge utilizing patterns of interactions. These patterns are given the short form of SECI. Knowledge is considered a tactical source for companies. The dynamic capabilities and analysis govern that ownership of resources such as knowledge can add towards a firm's higher performance. Success is exclusively dependent on the abilities of management to create and take advantage of the knowledge that permits them to build a sustainable competitive advantage for their organizations (Yeow, 2014). That is a sign of the accomplishment of a business endeavor.

Literature recalls two important theories of competitive business advantage i.e. Market Based View (MBV) also known as the industrial organization model (Caves, 1980; Porter, 2004), and Resource-Based View (RBV) (Wernerfelt, 1984). One thing common in both of these theories is the explanation of achieving sustainable business advantage. The acquaintance that is based on capability analysis of strategy has also been derived from the RBV. KCP widens the existing strategic orientation for firms to keep themselves a step ahead then rivals. The impact of this is not meant for larger companies rather it is equally applicable for small entities as a response to forceful international and local competition (Tsiotsou et al., 2010). Muthuveloo, Shanmu gam, and Te oh (2017) stated that tacit knowledge management is hard to manage, however once established, this has a noteworthy impact on organizational performance.

Porter (1980) has given the strategy called typology to attain a competitive business advantage. Porter, showed them as a steady array of movements that are aimed at generating an explicit form of business advantage i.e. differentiation or low cost. Though typologies may not recognize the significance of diverse dimensions (Day & Wensley, 1988) model regarding competitive business advantage says that competitive advantage should result in higher performance and other allied indicators that include customer allegiance, market share, and profitability. Recent work is a reminder on the issue of whether differentiation and cost leadership denotes reciprocally exclusive or compatible approaches.

While scrutinizing the role of KCP on a firm's performance is a promising research topic. Ramadani et al., (2017) had established the implication of knowledge as an influential feature for organization performance in several countries, especially in Balkan Region. The knowledge creation process is a vital player for the competitive business advantage. It helps the organization to remain a step ahead of its rivals. KCP has an everlasting impact on the overall performance and standing of the company in a given industry. In previous studies, its role has been discussed and it has a positive impact if adopted by the companies. Accordingly, this hypothesis is presented:

H1: The knowledge creation process has a positive association with competitive business advantage

Knowledge Creation Process and Organizational Learning (OL)

The association between KCP and organizational learning has been acknowledged in empirical and conceptual literature (Ramirez et al., 2011; Dermol, 2013). In reality, OL and KCP are jointly dependent (Lyles, 2014). Organizational learning increases when the sharing of knowledge takes place via a manner of social communication in diverse groups of individuals. This is all due to the outcome of a shared understanding. As a process, it consists of four main phases. These stages are; knowledge dissemination, information acquisition, shared interpretation, knowledge dissemination, and organizational memory (Huber, 1991; Kandemir & Hult, 2005).

Malerba (1992) states that organizational learning depends on the exploitation to a certain extent of an internal or external source of knowledge the middle managers must facilitate knowledge transfer since it is an essential factor for organizational learning (Costanzo & Tzoumpa, 2008). Dermol (2013) from experiential research in service firms located in European countries, concluded that organizations where activities related to the knowledge creation process take place encounter changes in cognition and behavioral appearance. It has been claimed that the stages of the KCP model make a distinction between learning organizations and their rivals.

In the Spanish context, the vital impact of socialization and another mode of KCP that is internalization on organizational learning is felt (Ramirez et al., 2011). It has been advocated that the first mode that is socialization has the prospective to manipulate knowledge learning of all the other three phases of learning that are individuals, groups, and companies. Moreover, the combination has been defined by many that it has a positive effect on team learning and organizational learning.

It is also emphasized that externalization may enforce learning by the outcome of personal learning on group learning and consequently on Organizational learning. Moreover, the combination has been defined by many as that it has a positive effect on team learning and organizational learning. The four aspects of the SECI model enrich the organization memory which plays a significant function in the expansion of organization learning (Van et al., 1999).

Finally, as recommended by many researchers the last stage of the KCP model is strongly interconnected to Organizational learning (Ramirez et al., 2011; Nonaka et al., 1994). This stage motivates the individuals to put things into a practical mode of organizational knowledge and integration until it results in concrete actions. Internalization is connected with an insightful process of learning that paved the base for appropriate changes and overall makeover of the organization. So, the following hypothesis has been proposed:

H2: The knowledge creation process has a positive association with organizational learning.

Knowledge Creation Process and Innovation

Generally acknowledged and emphasized by Drucker, (1985) and Porter, (1986) that the ability of the organizations is critical concerning innovation, endurance, and competitiveness. In this aspect, prior researchers have identified several enablers for innovation. Particularly numerous researches indicated that a company's aptitude to take in and to make use of information is the key spillover force for novel and strategic innovation (Nonaka & Takeuchi, 1995; Popadiuk et al., 2006; Sankowska, 2013). In reality, innovation indicates the successful completion and accomplishment of inventive ideas and procedures (Cummings & Kiesler, 2003). Innovation has been defined in words such as acquired knowledge that is integrated into processes, products, or services (Afuah, 1998).

Innovation is particularly considered as a central source for achieving higher level performance in this environment of competitiveness (Lyon & Ferrier. 2002). The utilization of diverse types of innovation may result in the effectiveness of business growth (Damanpour & Gopalakrishn, 1998; Damapour et al., 1989; Rogers, 1995). As suggested in previous studies the well-recognized forms of innovation are categorized as administrative innovation and the other is technological innovation (Damanpor, 1991). However, there is a sharp difference in both types of innovation. As technological or industrial innovation refers invention of innovative processes or products and services whereas the other includes the latest policies and formations of administration (Dewar & Dutton, 1986; Hage, 1980; Normann, 1971). This all can be achieved by the business if they create and disseminate new knowledge. Innovation is a source for the companies to compete in the environment of competitiveness and act as a basic element for everlasting accomplishment for forming a vibrant atmosphere (Baker & Sinkula, 2002; Darroch & McNaughton, 2002; Lyon & Ferrier, 2002; Scherer, 1992).

It has been recommended in the literature that the amount of use of knowledge acquired through inside or outside resources has a constructive impact on an organization's performance and innovation. The degree of innovation may be adjudged through the quantity of innovative knowledge applied after the acquirement (Hall & Andriani, 2003). The effect of both explicit and tacit knowledge on the momentum and excellence of innovation is of quite an importance (Zohoori et al., 2013). The firms' survival largely depended on how swiftly they innovate compare to non-innovative companies to attain competitive advantage.

Popadiuk and Choo (2006) stated that innovation is based on a continuous knowledge creation process that triggers the opportunities and generation of new ideas. The first two modes of KCP i.e. Socialization and externalization are positively interconnected with the novelty and concept of product ideas (Schulze & Hoegl, 2008). Popaiuk and Choo (2006) also advocated that these two modes are base for knowledge creation, generation, and communication to others. Moreover, these authors also explained that the last mode of KCP i.e. internalization has an encouraging effect on the new ideas about the products.

H3: The knowledge creation process has a positive association with innovation.

Organizational Learning as a mediator between KCP and Competitive Business Advantage

Given RBV (Resource-based view), organizational resources and capabilities laid the base for formulating cutthroat business strategies (Hunt & Morgan, 1995). These strategies are meant to shape the way required to realize an ideal configuration towards market settings taking into account the organizational resources and capabilities available (Grant, 1991). Barney (1997) stated that to get hold of competitive advantage, the organization has to possess the resources and aptitude that should be a valuable, rare, inimitable, and non- substitute. That is also denoted as (VRIN). In prior literature, it has been maintained that organizational learning is considered a VRIN capability concept. Therefore, OL is important on the pretext that this potential can assist to take gain of opportunities and offset pressure, ultimately this will result in a beneficial market state (Hult, Ketchen & Nicholas, 2003).

The group following behavioral approach indicated organizational knowledge as the effect of the interconnection of an incentive that changes the behavior (Cyert & March 1992; March & Olsen, 1976). On the firm level, knowledge specifies the association between a firm and its cultures (Levitt & March 1988). The vital task of managers in facilitating knowledge transfer is the important factor for organizational learning (Costanzo & Tzoumpa, 2008). It has been proposed that organizational groups "*constitute an important organizational context where OL takes place*" via knowledge formation and transfer resulting from the interface of employees (Costanzo & Tzoumpa, 2008).

In literature, it has been proved that organizational learning acts as a catalyst to accomplish immense acquaintance and deeper perceptive of the environment. Through OL, the firms can gratify more proficiently its clients and real needs by way of their services and products (Day, 1994; Sinkula, 1994). Gridlock in strategies may be removed as well as difficult decisions may also be taken through better implementation of organizational learning (Slater et al., 1995). It is considered complex and equally hectic to develop, as it needs dexterity in both creating novel learning and absorbing the gained knowledge (Huber, 1991). OL is a rare capability to face the challenges simultaneously (Slater et al., 1995).

Organizational learning is also measured as a mode of easy transferable as these resources are intangible and persistently stranded in the organizational process (Barney, 1991; Huber, 1991). The arguments explained in the literature state that, as VRIN capability organizational learning has an applicable function in devising business plans leading to a Competitive business edge (Kenny, 2006). Furthermore, OL is also helpful in organizational changing, since generative knowledge is taken as a major component in the expansion of radical innovations (Senge, 1990). This certainly permits the companies to generate markets and redesign the working rules by replacing the existing ones (Darroch, 2005). These days a superior learning ability is essential due to the rapidity of the changes taking place around the globe. Organizational learning is undoubtedly gain a role in strategy execution and adaptation in the environment to produce what the end-user wants (Madhavaram & Hunt, 2008). This study also attempted to add to this aspect whether organizational learning concurrently cultivates the accomplishment of leading cost and differentiation cutthroat business strategies. Moreover, it will also see whether these two policies implemented together lead towards better performance.

As a concern of differentiation strategy, it includes product development for gaining advantages, to be exceptional in the business to get superior benefits for the customer. The other strategy endeavors to accomplish lesser costs than the rivalry while not negotiating on the significant aspects of quality, service, or other things. The study is used to convert internal competence into reduce costs for the business and less price for the customers. Organizational learning economic school (Bell, Whitewell & Lukas, 2002) believes learning is a most noteworthy mechanism for gaining a boost in the efficiency of companies. Thus, OL is more probable to apply cost leadership strategies underpinned by learning curves. Organizational learning facilitates companies to gain a competitive advantage by enhancing information process activities which allow faster and efficient activities.

OL is a substantial element for gaining sustainable business advantage and overall important for organizational performance. Baker and Sinkula, (1999) have defined that learning direction had a straight cause on the efficiency of the company. A widespread thought in literature is that strategic management increases the life duration and dexterity of companies is founded on the aptitude of knowledge and adjustment (Fiol & Lyles, 1985; Dibella et al., 1996; Stata, 1989). These companies usually respond rapidly as compared to competitors to solve the deadlocks and in return to sustain their extended business advantages (Day, 1994; Slater & Naver, 1995). Organizational capabilities are also supportive for perceiving market developments and trends as well as to attain an advantageous edge (Sinkula, 1994, Tippim & Sohi, 2003). Studies have proven that organizational learning plays a significant role between both company's performance and organizational learning.

Organizational culture is elaborated and considered as an adjustment in the position of organizational knowledge and schemes of understanding that brings on organizational learning (Agyris & Schon, 1978). They proposed the organizational learning theory. These two authors recognized two types of learning. One is known as single-loop learning and also known as adaptive learning. This refers to the trivial adaption of behaviors that encompasses rectification of mistakes without showing the significance of present strategies and norms modulating the action. Behavioral and cognitive perspective organizational learning acts as a transform in the repertory of a company's likely behaviors resulting from the acquisition, interpretation, distribution, and storage of information. This study analysis is also based on Nonaka, (1995) SECI model which has a relation with organizational learning. This joins cognitive and behavioral magnitudes of learning. It is established that socialization and internalization are targeted towards behavioral learning at the same time as the remaining two modes are meant for cognitive learning (Bootz, 2001).

H4: it is concluded that organizational learning has a mediating impact between KCP and competitive business advantage.

Innovation as a mediator between KCP and Competitive Business Advantage

Previous studies have suggested that acquaintance is understood as a vital ingredient of innovation. The extent of knowledge that has been acquired from within or outside has an affirmative outcome on an organization's performance (Svetina & Prodan, 2008). However, to attain a competitive advantage the role of innovation is extremely of utmost importance. Innovation is the foremost driver for a firm's achievement and success. The success and unrelenting survival of an organization depend on its capacity to make full use of its abilities through hunting out for new spheres (Raisch et al., 2009).

Innovation is further bifurcated. One is Exploitative activities that persuade current abilities and result in incremental innovations. While radical breakthroughs and innovations typically imitate the explorative activities of the company. Organizational ambidexterity has got substantial consideration, owing to its significance for the success of a firm. Supporters of the forceful capabilities of the view that to stay in touch in market transform organizations need dynamic capabilities that may generate, modify, or extend the present source base (Teece, 2007, Teece et al., 1997). Emerging economies and markets are defined by reasonably shaky political structures, legal complexities, and structures, which raise tactical confronts for companies.

Due to the competitive arena, innovation is the most important factor for a company's performance and advantage. Innovation can excel elevated production with an amplified market share that will result in rising income (Shefer & Frenkel, 2005). Innovation can uplift the financial growth owing to differentiated products (Zahra, Ireland & Hitt, 2000). In previous empirical studies, the association between innovation and performance and attaining competitive business advantage (Brown & Eisenhard, 1995; Damanpour, et al., 1989; Hansen et al., 1999; Thornhill, 2006;

Weerawardena et al., 2006). It has been noted out that innovation has a constructive force on business growth being costly and uncertain.

Innovation permits organizations to be more technically opportunistic to maneuver the market with greater momentum than rivals (Sarkees, 2011). This way firms will get advantage from sensitive flexibility and competence for creating an essential technical way out and differentiated products. This aptitude is composed of an exceptional proficiency of the company which becomes hard to replicate and thus creates an aggressive edge (Hamel & Prahalad, 1994). It is important as it facilitates the company to develop by learning as well as building up new spheres that are beneficial to its innovativeness (Tuominen, Rajala, & Möller, 2004) and increases company performance and ability.

In a previous study, it has been emphasized that a company's knowledge base influences the innovation that is critical for a company's performance. These authors suggest that innovation is a catalyst and mediates between the KCP and competitive business advantage. Thus, a hypothesis is developed:

H5: Innovation mediates the relationship between KCP and competitive business advantage.

Theoretical Model

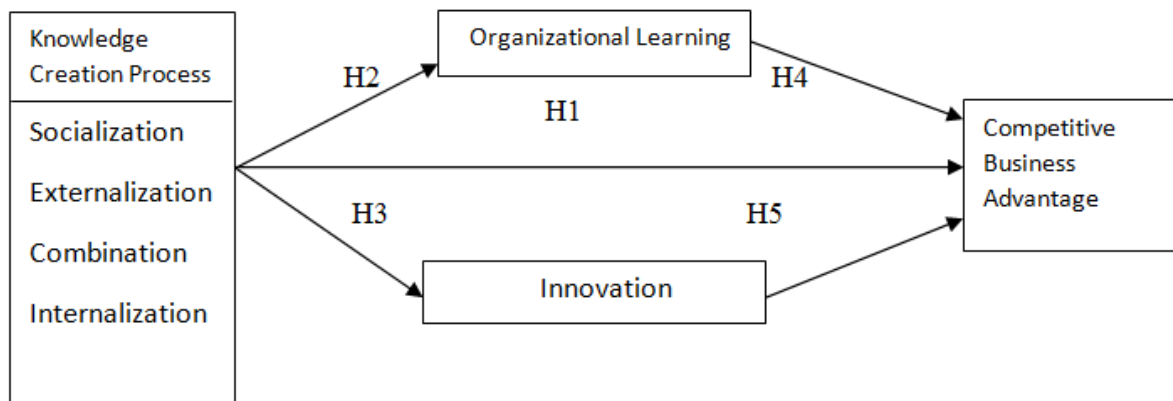


Figure 1: Theoretical Model

Methodology

Data collection and research context

A questionnaire tool is used for data collection and the respondents of our research were 384. Data collection was made through respondents of various firms and businesses based in Sheikhpura and Lahore. Variables were measured using a 5 Likert scale ranging from 1(Strongly Agree), 2(Agree), 3 (Neutral), 4(Disagree), 5(Strongly Disagree). Of 384 respondents, 98% of responses were from the respondents which shows that they have familiarity with the issues under study and were quite convinced in their responses given.

Statistical Analysis

In the study smart-PLS exclusively, Smart-PLS 3, is applied for estimation of the study model (Hair et al., 2012). The following were the reason that urged using of PLS. Foremost, the study focused on the prediction of the dependent variable and PLS-SEM is one of the best tools to explain the theoretical relationship in models. Secondly, it is the proper tool to use keeping in view the complexity of the model as this is an exit in the present scenario too (i.e. Multiple mediations).

Results

Evaluation of the Measurement Model

Measurement has been done through a structural equation model. We used the PLS algorithm to verify the validity and reliability of the variables and check the discriminant validity, we also check the loading values, and we also run the bootstrapping test. Self-administered questionnaires were used as a tool in this study. The questionnaire was distributed and got filled by visiting different factories in Sheikhpura and Lahore. The model after assigning the questions came out as shown in **Fig.01**:

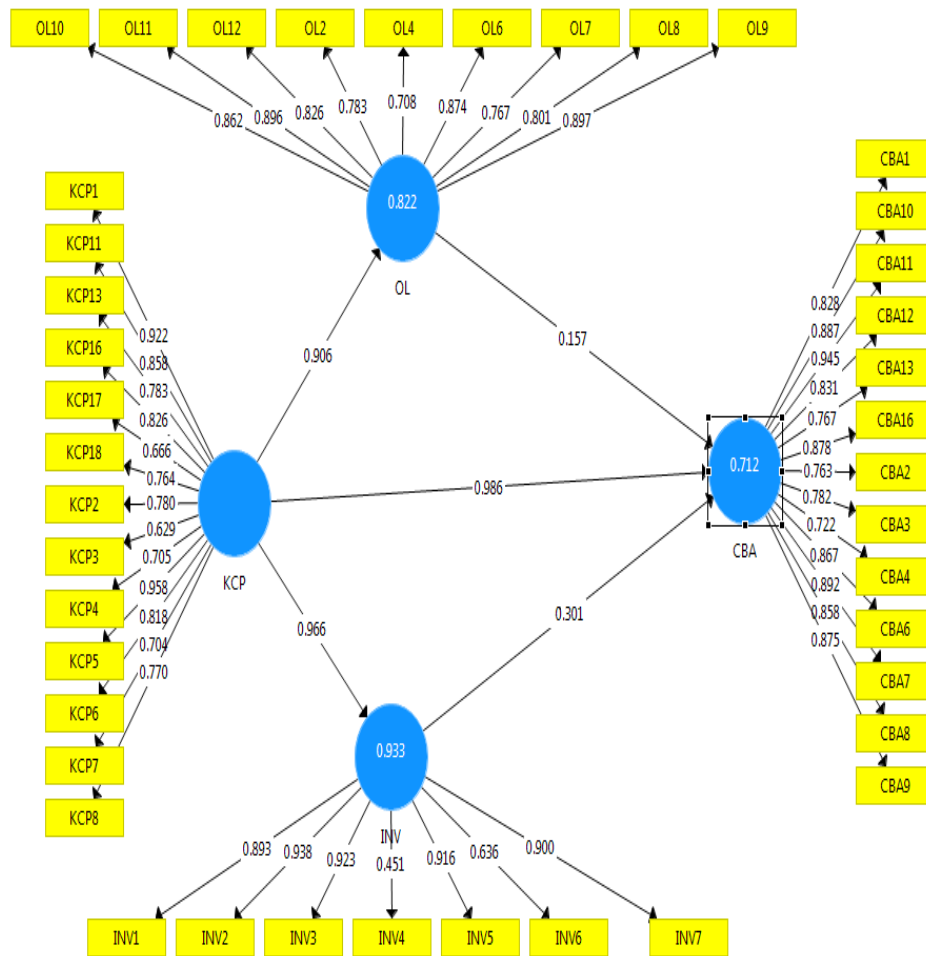


Figure 2: The structural Model

Indicator Reliability

Values of outer loadings of each variable have been shown accordingly. The threshold limit for each indicator (i.e. Loadings) must be greater than 0.4 and close to 0.7 (Lin et al., 2016). Table 1 demonstrates that the values of indicator reliability are inadequate range. However, some indicators were left out due to intolerable value range except a couple of values which are also taken despite their low values as they were not affecting the overall result.

Internal Consistency Reliability

As recommended by Hair et al., (2016), composite reliability (CR) is more reliable to examine a study. The value of this reliability varies between 0 and 1. If the value of the composite value is more than 0.7, the model is significant. It is used to measure and check internal reliability and dependability. Eventually, the Composite reliability in our study of all variables also comes to more than 0.7 which proves the significance of the model.

Table 1. Measurement model.

Construct	Indicators	Loadings	Cronbach's alpha (α)	Composite reliability (CR)	The average variance extracted
Knowledge Creation Creation Process	KCP1	0.922	0.948	0.955	0.622
	KCP2	0.780			
	KCP3	0.629			
	KCP4	0.705			
	KCP5	0.958			
	KCP6	0.818			
	KCP7	0.704			
	KCP8	0.770			

	KCP11	0.858			
	KCP13	0.783			
	KCP16	0.826			
	KCP17	0.666			
	KCP18	0.764			
Organizational Learning	OL2	0.659	0.941	0.951	0.682
	OL4	0.711			
	OL6	0.874			
	OL7	0.767			
	OL8	0.801			
	OL9	0.898			
	OL10	0.862			
	OL11	0.896			
Innovation	OL12	0.826			
	INV1	0.893	0.913	0.935	0.684
	INV2	0.938			
	INV3	0.923			
	INV4	0.451			
	INV5	0.916			
	INV6	0.636			
	INV7	0.900			
Competitive Business Advantage	CBA1	0.810	0.965	0.969	0.706
	CBA2	0.841			
	CBA3	0.868			
	CBA4	0.804			
	CBA6	0.805			
	CBA7	0.833			
	CBA8	0.858			
	CBA9	0.875			
	CBA10	0.882			
	CBA11	0.941			
	CBA12	0.831			

Notes: CBA: Competitive Business Advantage, INV: Innovation, KCP, Knowledge Creation Process, OL: Organizational Learning.

Table 2. The measurement model.

	Fornell-Larcker criterion				Heterotrait–monotrait ratio (HTMT)			
	CBA	INV	KCP	OL	CBA	INV	KCP	OL
CBA	0.762							
INV	0.692	0.733			0.804			
KCP	0.638	0.682	0.751		0.744	0.811		
OL	0.606	0.584	0.600	0.637	0.658	0.714	0.783	

Notes: CBA: Competitive Business Advantage, INV: Innovation, KCP, Knowledge Creation Process, OL: Organizational Learning.

Convergent Validity

Average Variance Extract is a tool and unit, which denotes the convergent validity measurement. AVE value of all constructs has to be greater than 0.5 to establish the convergent validity (Hair, Hult, Ringle, & Sarstedt; 2014). The reliability of (AVE) in our model is also reliable as ostensible from the table as the values are above 0.5.

CV depicts the degree that is a measure correlates definitely with alternative measures of the same construct. AVE is a frequently used measure to make certain convergent validity. Table 1 depicts that values are within a satisfactory threshold of 0.5 (Hair et al., 2016).

Discriminant Validity

It is the degree to which a hypothesis is different from other hypotheses by observed values. As a result, developing this infers that a hypothesis is an exclusive phenomenon not characterized as such other hypothesis in the model assessment and has the objective to make certain that a reflective construct has the strongest associations with its indicators in the PLS path model (Hair et al., 2017).

Estimation of the Structural Model

The Coefficient of Determination (R²)

Co-efficient of determination (R square) put in the picture that how well the Partial Least Square (PLS) model forecast our data set (Surienty, Ramayah, Lo & Tarmizi, 2013). R square is a fundamental matrix that shows how much variance explains in the model R-square is a statistical measure that is used to evaluate the decency to decide the fit of our regression model. This analysis shows the value of inner model endogenous variables. Its value should be greater than 0.3. In our research, the values are greater than the acceptable limit, It disclosed that values encountered the threshold criteria (Hair, Hult, Ringle, & Sarstedt, 2014). Adjusted R square is the exceptional form of R square co-efficient of determination adjusted R square tells how much terms fit in cure or line adjusted R square value always close to R square.

Total Effects:

The Table shows that the direct relationship between the variables (hypothesis) was investigated/analyzed and confirmed.

Table 3: The Total Effect Table

Path Coefficients (Bootstrapping)	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
INV_ -> CBA_	0.301	0.302	0.122	2.465	0.014
KCP_ -> CBA_	0.986	1.004	0.172	5.748	0.000
KCP_ -> INV_	0.966	0.966	0.003	359.892	0.000
KCP_ -> OL_	0.906	0.908	0.017	52.176	0.000
OL_ -> CBA_	0.157	0.140	0.136	1.157	0.248

Notes: CBA: Competitive Business Advantage, INV: Innovation, KCP, Knowledge Creation Process, OL: Organizational Learning.

Interpretation

If the value of P is less than 0.05 which it shows that our hypothesis is positive and accepted, but if the P-value is larger than 0.05 which means it is negative and cannot be supported (Hair et al., 2014).The given above shows that innovation and competitive business advantage shown P-value 0.014, which means our hypothesis, is supported. The knowledge creation process and competitive business advantage are shown P-value 0.000 which means our hypothesis is supported; it can be said that if a manager is well aware of his job task and have an acquaintance of the work the company or firm can attain a business advantage. The knowledge creation process and innovation have shown a P-value of 0.000 which means our hypothesis is supported. The knowledge creation process and organizational learning have shown a P-value of 0 which means our hypothesis is fully supported. Organizational learning and competitive business advantage have shown P values as 0.248, which means OL does not mediate the association of the Knowledge Creation process and competitive business advantage.

From the outcome of the result, it is clearly showing good results that how much knowledge creation process may affect the success of any given business. If it is seen from the perspective of innovation the results are quite satisfactory. Novelty is a functional policy to create several clients (Robinson & Stubberud, 2013). Due to the everlasting and perpetual increase of customers’ demands innovation became an indispensable element to gain and attain a competitive business advantage.

Discussion

The continuous pressure all over the globe due to changing patterns and growth prospective in markets urging the businesses to discover new business models of innovation to stand big (Awate et al., 2015; Frost & Zhou, 2005). By considering the varied knowledge resources, businesses can enhance naive ideas, innovative products growth, and overall performance (Sharma, Davcik & Pillai, 2016).

The results in the above table of bootstrapping show the hypothesis supported and not supported. KCP has a positive association with organizational learning and innovation. Both OL and innovations are mediators of our study and both have shown a significant relationship with our independent variable. Results show that innovation has appreciably mediated the relationship between KCP and competitive business advantage. As a concern of non-supporting of mediator role of organizational learning between KCP and competitive business advantage, it may infer that; the

Pakistani market culture is entirely different of other countries. From the results, it may be deduced that managers/ executors of Lahore and Sheikhpura firms have no belief that organizational learning has an impact on competitive business advantage. This might be the possible reason for the rejection of our hypothesis.

On the notion that one of the most accepted theories in knowledge management is known as SECI, the prime aspire of the study was initiated to recognize the function that this model play. The four modes of KCP contribute a lot towards innovation and firms' performance. The study gives further pragmatic evaluation to define the assumed association of variables. The result is following previous work (Nonaka & Takeuchi, 1995; Popadiuk & Choo, 2006; Ramirez & Kumpikaite, 2012).

It is important to note that as reckoned by Nonaka and Takuchi (1995), the knowledge creation process act as a catalyst for companies' innovation. KCP is thus considered a pivotal factor for business performance and advantage over rivals. It has been concluded that KCP is not only meant for the Japanese context but also plays an important role in other cultures and working conditions. This is specifically important as we mentioned earlier that some researchers are of the view and challenged the universal adaptability of the SECI model (Glisby & Holden, 2003; Huchting & Weir, 2005).

The dimension of this model SECI that permits distribution of implicit knowledge namely socialization proves the strong persuasion on innovation performance. The significance of formation and ultimate dissemination of tacit knowledge for improvement in novelty is thus confirmed. This shows the same findings as suggested by Huchings and Weir, (2005). Moreover, as hypothesized our study divulges that KCP has a positive association and vital impact on organizational learning and innovation. Thus, it proved that knowledge creation is an essential aspect of Organizational learning and findings are consistent with the work of Nonaka and Takeuchi, (1995), Ramirez et al., (2011).

Finally, our research indicated that other modes of this model are also importantly related to both mediators and confirm their importance. OL is considered an imperative major aspect that contributes to overall business performance. This compliance is based on the implementation within firms which allows coping with customer needs and evolving technologies. The notion of this research shows a conducive effect of knowledge creation process on innovation and organizational learning appears that have effects on business working.

Limitations and Direction for Future Research

It is a cross-sectional study. Future research may consider having a longitudinal study in different geographical locations and explore data through service industries as well other industries may also be explored in future. Though the study has its strength nevertheless it has some limitations giving the way for further avenues for research. The geographical area of our study was confined to a couple of cities in Punjab. In the future, a larger area more specifically at the country level may also be considered for expanded research.

A study on a superior sample size would amplify the perspective of the research. In this research, we used organizational learning and innovation as the mediators between KCP and competitive business advantage whereas in future research other mediators or moderators may also be incorporated into our study model. These may be organizational dexterity or the size of the firms. A proportional study would be an appealing perspective. Finally, the mixture of both empirical approaches may also use to study this research model.

Conclusion and recommendations

This research work advocate and study the dual mediation that elucidates the character of innovation and organizational learning as mediators between the knowledge creation process and competitive business advantage. The SmartPLS- SEM had been used to analyze the data, collected via a questionnaire from different industries of Sheikhpura. The empirical findings imply that innovation is inevitable for attaining competitive business advantage from the perspective of managers in the context of the local market. Hence keeping in view the findings of the study it is recommended that if an organization wants to achieve a competitive edge against its competitors then it must focus on innovation. This is one of the main aspects through which the organizations can gain business advantage. Although organizational learning is also important and hence should be continuously focused on but knowledge creation process had more effect on gaining business advantage as compared to organizational learning.

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