

# Interrelationship among Intellectual Capital and Organizational Effectiveness through Open Innovation and Organizational Learning Capabilities: An Integrative Literature Review and a Conceptual Framework

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## ABSTRACT

*Present era has witnessed the evolution of economy from traditional and manual to technologically acquaint economy that engenders knowledge-intensive industries. In this context, intellectual capital resources have gained significance and these resources now reflect organizations' real value (Taie, 2014). Business organizations have now realized a significant fact that such resources are crucial factor for attaining competitive advantage (Eid, 2018). Today's turbulent environment also needs to focus more on open innovation and organizational learning capabilities that serves as a strategic tool to enhance desirable organizational results as well as improves its competitive position. The purpose of this paper is to scrutinize the linkages between intellectual capital and its dimensions, organizational learning capabilities, open innovation and organizational effectiveness and to develop an integrative conceptual framework. A comprehensive integrative literature review from peer-reviewed journal articles, books and conference papers addressing intellectual capital was*

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carried out. This paper also presents a comprehensive set of literature for deep and better understanding on the nature, role and importance of intellectual capital and its dimensions for improving organizational effectiveness through mediating role of open innovation and organizational learning capabilities. Finally, managerial implications and the future research directions are discussed.

**Keywords:** Intellectual Capital, Organizational Learning Capabilities, Open Innovation, Organizational Effectiveness

## INTRODUCTION

In the present scenario, organizations are facing major challenges to be dynamic, highly innovative and capable to develop business strategies along with fierce competition (Fragouli, 2015). Under such turbulent environment, organizations have to invest more in intangible assets than in tangible assets for creating knowledge-intensive environment in the industry and increasing effectiveness (Obeidat et al., 2017). In this context, intellectual capital can act as an organizational tool to improve organizational value as well as performance (Musleh Al-Sartawi, 2017; Eid, 2018). Accordingly, modern organizations need to pay attention towards development of intangible assets because such assets become a fundamental source of organizational wealth creation (García-Ayuso, 2003), sustainable success (Subramaniam & Youndt, 2005) and consequently improve corporate performance (Riahi-Belkaoui, 2003; Clarke et al., 2011). This era, therefore calls for concentration on intellectual capital where employees tend to enhance their learning capabilities, which in turn enhance their abilities (Allameh et al., 2010) and consequently improve organizational effectiveness (Kanwal et al., 2017). Intellectual capital could generate positive behaviour i.e. learning among employees (Hsu & Fang, 2009), which enhances employee performance. Further, scholars claim that organization's effectiveness depends on individual employee's performance (Fulmer et al., 2003); hence it is necessary to improve performance of individual employees to enhance organizational effectiveness. Thus, organizational learning capabilities link intellectual capital to nurturing and fostering organizational effectiveness.

Further, innovation becomes inner or core need of firm's knowledge management system along with learning processes (Dolińska, 2016). However, presently firm's innovativeness depends upon intangible assets (intellectual capital) and acquisition of knowledge (Subramaniam &

Youndt, 2005). Consequently, every company is in need to constantly enhance its intangible assets to stay innovative (Chesbrough, 2003; Grimaldi et al., 2017). However, due to today's changing environment it is required to focus more in the direction of open innovation that permits external partners to enter the innovation process. Open innovation serves as a strategic tool that enhances organizational performance as well as improves its competitive position (ibid). Huhtala (2019) states that different researchers have been investigated the relationship between innovation management and organizational effectiveness in different academic fields as economics, organization management and marketing. In this context, present paper contributes an integrative conceptual framework by taking into consideration significant review of literature based on intellectual capital, organizational learning capabilities, open innovation and organizational effectiveness. The present research provides a deep and better understanding on the nature, role and importance of knowledge-based value driven intellectual capital and its dimensions for improving organizational effectiveness through enhancing organizational learning capabilities and open innovation.

## LITERATURE REVIEW

### Intellectual Capital

Initially, in 1969 John Kenneth Galbraith expressed the term 'Intellectual capital' and its significance in a letter to economist Michael Kalecki. He stated that "I wonder if you realize how much those of us in the world around have owed to the intellectual capital you have provided over these past decades" (as cited in Serenko & Bontis, 2004; Alghamdi et al., 2016). According to Noordin et al. (2017) Intellectual capital is "knowledge that is of value to an organization" which means managing knowledge to create intellectual capital within organisation. According to Stewart and Capital (1997), intellectual capital is a broader concept and a mixture of information, knowledge or intellectual assets and experience owned by every individual within the organization that can be used for the creation of organizational wealth and acquire competitive edge.

Intellectual capital is combination of heterogeneous type of resources, so it is necessary to divide these resources into different components and consider every component independently (Molodchik et al., 2012). According to the literature, it includes three components: 'Human

Capital’, ‘Structural Capital’ and ‘Relational Capital’ (Stewart & Capital, 1997; Yang & Lin, 2009; Sumedrea, 2013; Nuryaman, 2015; Gogan et al., 2016; Buenechea-Elberdin, 2017; Abualoush et al., 2018).

Human capital represents the individual knowledge stock of organization’s employees that generates intellectual capital from their knowledge, skills, competence, attitude, capabilities, intellectual agility and innovation (Wang & Chang, 2005; Sharabati et al., 2010; Sumedrea, 2013; Nuryaman, 2015; KOÇ, 2017; Asiaei et al., 2018; AlQershi et al., 2019). Relational capital supports the relationship of organization with its customer and stakeholders. And also, the main source of revenue generation for organizations is its customers (Nghah & Ibrahim, 2009; Tai-Ning et al., 2011; Nuryaman, 2015; KOÇ, 2017; Khaliq et al., 2018; Bratianu, 2018). Structural capital of firm represents explicit or codified knowledge that includes infrastructure, system policies and procedures (Subramaniam & Youndt, 2005; Ramezan, 2011; Nuryaman, 2015; Hejazi et al., 2016; KOÇ, 2017; Abualoush et al., 2018; Setyawati et al., 2019). Structural capital is related with knowledge created by an organisation and that is inseparable knowledge of the organisation (Joshi et al., 2010).

Therefore, on the basis of above discussion, this study offers the following proposition:

***Proposition 1: Intellectual Capital is a function of Human capital, Relational capital and Structural capital.***

## **Open Innovation**

Presently, ‘Open Innovation’ is considered as a unique phenomenon, in the area of innovation management (Volna & Kohnova, 2014). The term “open innovation” has been first introduced by the professor and executive director of ‘Open Innovation Centre’ at the University of California Haas, Henry Chesbrough in 2003 in his book “Open Innovation: The New Imperative for Creating and Profiting from Technology”. It can be defined as “the deliberate use of the tide of knowledge to accelerate internal innovation, as well as the expansion of the markets for external use of innovation” (Chesbrough, 2003). Under innovation management model, open innovation mainly includes two dimensions: Unbound open innovation and Outbound open innovation. Unbound open innovation is related with building relations with external organizations or individuals with the aim of taking advantages of their technical and scientific competences for improving internal innovation performance. Outbound open innovation is related with building relations with external organizations or individuals

with the aim of commercially exploiting technological knowledge (Chiaroni et al., 2010; Pellegrino, 2017). Additionally, a combined concept of inbound and outbound open innovation introduced by Enkel et al. (2009) i.e. ‘coupled process’ which is basically “co-creation with complementary partners through alliances, cooperation and joint ventures during which give and take are crucial for success”.

### **Organizational Learning Capabilities**

The concept of ‘Organizational Learning’ is also referred as ‘Organisational Learning Capability’ (Shoid et al., 2012). It was first used by Cyert and March (1963) in their initial study on the ‘Behavioural Theory of the Firm’. They viewed organizational learning as a change in behaviour in response to a stimulus. In the present era, organizational learning capabilities have been considered as an organizational ability that promote learning within the organization by implementing appropriate set of management practices, structures, policies and procedures (Camps et al., 2011; Nwankpa & Roumani, 2014; Gomes & Wojahn, 2017). Moreover, it related with generating, distributing and preserving knowledge of organisation itself (Argote & Hora, 2017). When employees of the organization are trying to learn, interact and exchange their knowledge with each other, then potential among groups will increase and such potential helps the employees to take effective action/decision (Jerez-Gomez et al., 2005). Furthermore, Hussain et al. (2018) found that organizational learning capabilities have positive influence on organizational performance.

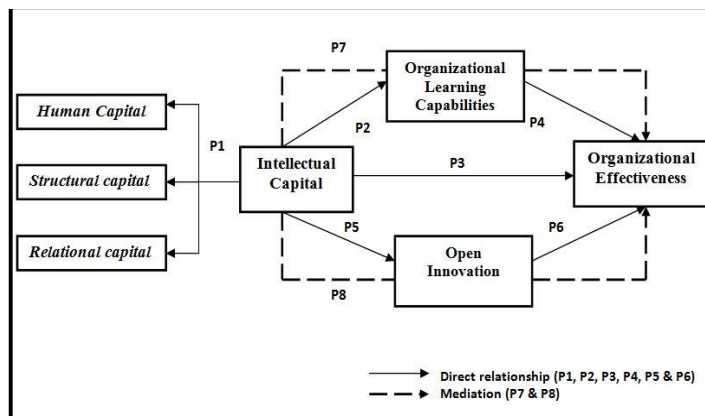
### **Organizational Effectiveness**

Organizational effectiveness is the firm’s ability to access & absorb the activities effectively in attaining excellent outcomes as per the aims of the organization (Kanwal et al., 2017). An ineffective unit of organisation leads to failure, due to lack of co-operation with rest of the organisation (Gigliotti, 1987). According to Chidambaranathan and Swarooprani (2015), the ultimate goal of an organization is to achieve a high level of organizational effectiveness. As organizational effectiveness is the ability of the association to access to the essential resources in a systematic manner (Cameron, 1978). Additionally, researchers (Scott et al., 2008; Singh & Gupta, 2016) are of the view that organisational effectiveness is closely related to high performance. Further, Daftuar (1983) derived the nine non-financial factors of organizational effectiveness that are

Organisational Attachment, Job Involvement, Independence, Self – Control, Legitimization, Organisational Commitment, Innovation, Consensus, and Job Satisfaction. Zlatkovic (2018) derived four models of organizational effectiveness which are ‘Human Relations Model’, ‘Internal Process Model’, ‘Open Systems Model’, and ‘Rational Goal Model’. Tayal et al. (2019) discussed eleven measures of organizational effectiveness that are ‘Leadership Styles’, ‘Talent management’, ‘Customer service’, ‘Communication’, ‘Training’, ‘Technology utilization’, ‘Organizational change’, ‘Organization innovation’, ‘Knowledge management’, ‘Strategic planning’ and ‘Organization culture’.

### An Integrative Conceptual Framework

This section presents an integrative conceptual framework based on pertinent literature review of intellectual capital, open innovation, organizational learning capabilities and organizational effectiveness as shown in Fig. 1. First Proposition (P1) has been developed to confirm the components of intellectual capital. This proposed model majorly depicts the direct influence of intellectual capital, organizational learning capabilities and open innovation on organizational effectiveness (P3, P4 and P6). Further, propositions have been developed to understand the relationship between intellectual capital and organizational learning capabilities (P2), intellectual capital and open innovation (P5). Two propositions (P7 and P8) have showed the mediating effect among intellectual capital and organizational effectiveness through organizational learning capabilities and open innovation.



Source: Compiled by the Researcher

**Fig. 1: An Integrative Conceptual Framework**

## Theoretical Support of the Proposed Model

### *Relationship between Intellectual Capital and Organizational Learning Capabilities*

Nowadays, knowledge asset of any firm can be converted into organization value creation all the way through linking intellectual capital with organizational learning capabilities (Dadashinasab & Sofian, 2014; Chahal & Bakshi, 2015; Tabaghdehi et al., 2018). Hsu and Fang (2009) stated that intellectual capital has its impact on the knowledge management and also improves organizational learning capability. Researchers are of view that all three dimensions of intellectual capital are associated with organizational learning capabilities (Gunsel et al., 2011; Farsani et al., 2012; Moghadam et al., 2013; Nokohan & Bohlooli, 2015; Liu et al., 2017; Tabaghdehi et al., 2018; Omar et al., 2019).

Nowadays, investment on individuals is identified as the crucial factor in an organization. Such practices develop a knowledge-learning environment among employees that ultimately lead to effectiveness and permanence in organizational operations (Allameh et al., 2017; North & Kumta, 2018). However, managers improve the quality of their employees to increase number of knowledge workers by providing them training which enhances organizational learning capability (Jerez Gómez et al., 2005; Allameh et al., 2010; Aragón et al., 2014). Further, numerous authors argued that it is the human capital/resource who acquires new-fangled knowledge and obtains innovative ideas within the organization. This intangible asset is most valuable resource to any business organization and it is associated with organizational learning capabilities (Hsu & Fang, 2009; Kelly et al., 2011; Farsani et al., 2012; Moghadam et al., 2013; Nokohan & Bohlooli, 2015; Pasamar et al., 2019).

Structural capital also helps to deploy different resources to develop organizational intellectual capital management system which will help the organization in the enhancement of the organizational learning capabilities (Farsani et al., 2012; Bhatti & Zaheer, 2014). Researchers view that culture is one of the major elements of structural capital which may helpful to enhance organization's learning capability (Liao et al., 2012; Namada, 2017). Furthermore, many researchers mentioned in their studies that structural capital is associated with organizational learning capability (Hsu & Fang, 2009; Farsani et al., 2012; Moghadam et al., 2013; Bhatti & Zaheer, 2014; Nokohan & Bohlooli, 2015; Lev et al., 2016).

Presently, survival of any business organization depends upon continuous learning of its employees that eventually enhance capability to develop intellect and ability to build relational capital (Cegarra-Navarro & Sanchez-Polo, 2007). Interaction with customer can provide innovative and valuable knowledge that may develop organizational learning capability in the firm (Hsu & Fang, 2009). Researchers are of view that relational capital is also associated with organizational learning capabilities (Chang & Gotcher et al., 2007; Hsu & Fang, 2009; Farsani et al., 2012; Moghadam et al., 2013; Nokohan & Bohlooli, 2015; Martelo-Landroguez et al., 2018). Based on the discussion above, this study offers the following propositions:

*Proposition 2: Intellectual Capital is positively associated with Organizational Learning Capabilities.*

*Proposition 2a: Human Capital is positively associated with Organizational Learning Capabilities.*

*Proposition 2b: Structural Capital is positively associated with Organizational Learning Capabilities.*

*Proposition 2c: Relational Capital is positively associated with Organizational Learning Capabilities.*

#### *Relationship between Intellectual Capital and Organizational Effectiveness*

The resource-based theory analyses that the management of human, physical and intangible resources in a systematic manner which will gradually create value and enhance firm's competitiveness and effectiveness (Riahi-Belkaoui, 2003; Hitt et al., 2016; Holdford, 2018). Intellectual capital considered as one of the most important intangible asset of any organization. Furthermore, fact revealed by literature is that organizational effectiveness can be enhanced by the creation and accumulation of intellectual capital (Kannan & Aulbur, 2004; Kamaluddin & Rahman, 2009; Verma & Dhar, 2016, 2018). Consequently, some of the researchers emphasize that components of intellectual capital will jointly "share, promote and grow" the value of the establishment and result in improved performance (Chu et al., 2006; Ahmadi et al., 2013; Hashim et al., 2015; Gogan et al., 2016; Orugun & Aduku, 2017; Khaliq et al., 2018), thus, leading to reinforced organisation effectiveness (Zlatkovic, 2018).

Human capital management includes training & development, education and other initiatives which lead to increase the level of employees in terms of knowledge, skills, abilities and social values (Khayinga & Muathe, 2018). Accordingly, employee's satisfaction and performance will

increase as result of which firm performance will increase (Khayinga & Muathe, 2018; Velankar & Pahuja, 2019). Further, some authors analyzed the relationship between human capital & organizational effectiveness and stated that the success of organization depends upon business strategies management of human capital (Lawler, 2005; Adeyeye, 2009; Kramar et al., 2011; Josan, 2013; Singh & Gupta, 2016; Verma & Dhar, 2016, 2018).

In present competitive era, 'How systems and processes of the organization are managed', decides its efficiency and effectiveness (Bhatti & Zaheer, 2014; Jiang & Liu, 2015). According to Barkat and Beh (2018), proper management of structural capital can help an organization to produce long term value for it. Additionally, organizational culture is one of the essential components for implementation of structural capital in the organization (Sharabati et al., 2010; Wang et al., 2014; Obeidat et al., 2017; Asiaei et al., 2018). Researchers are of the view that corporate culture leads to system processes, leadership, productivity (Taylor, 2003), organizational performance (Cameron & Quinn, 2011; Mrisha et al., 2017) and organizational effectiveness (Zheng et al., 2010; Gochhayat et al., 2017). Researchers found that structural capital is the strongest component that effect organisation's effectiveness as compared to human and relational capital (Kamaluddin & Rahman, 2009; Verma & Dhar, 2016).

When parties have confidence on each other to exchange partner's reliability and integrity then trust generates between them (Hunt & Morgan, 1994). Such practices help the firm to maintain the long term relationships (Hashim et al., 2015; Gogan et al., 2016; KOÇ, 2017). As well, relational capital enhances the organizational information processing ability, it also maintains trust in relations among internal and external partners, assists information exchange process efficiently (ibid). Furthermore, researchers stated that relational capital is linked with organizational performance (Ahmadi et al., 2013; Hashim et al., 2015; Gogan et al., 2016; Orugun & Aduku, 2017; Khaliq et al., 2018). And also, the fact is that organizational effectiveness can be enhanced by improving the relational capital component of intellectual capital (Kannan & Aulbur, 2004; Kamaluddin & Rahman, 2009; Verma & Dhar, 2018; Zlatkovic, 2018). Based on the discussion above, this study offers the following propositions:

*Proposition 3: Intellectual Capital is positively associated with Organizational Effectiveness.*

*Proposition 3a: Human Capital is positively associated with Organizational Effectiveness.*

*Proposition 3b: Structural Capital is positively associated with Organizational Effectiveness.*

*Proposition 3c: Relational Capital is positively associated with Organizational Effectiveness.*

*Relationship between Organizational Learning Capabilities and Organizational Effectiveness*

In present hypercompetitive environment, business organization's primary aim is to find out different ways to increase their core competencies and gain competitive edge (Kanwal et al., 2017). Such organizations are incessantly putting efforts to be up-to-date and understand the environment in which they operate. According to Barker and Dickson (1996), learning is the pre-eminent practice over all other resources of the firm. Such practices facilitates competitive edge over competitors and considered as an essential key to improve organizational performance (Khandekar & Sharma, 2006; García-Morales et al., 2012; Ouma & Kombo, 2016; Weinzimmer & Esken, 2017; Werlang & Rossetto, 2019). Further, Spicer and Sadler-Smith (2006) explained that acquiring new knowledge or skill through learning leads to change in employee's behaviour that ultimately enhances efficiency and/or effectiveness of an organization. For this purpose, organizations are implementing organizational learning techniques and strategies in business processes (Khandekar & Sharma, 2006). As effective organizations focus upon their employees and help them to gain self-confidence and skills to deal with competitive environment (Phyu & Vinitwatanakhun, 2015). Furthermore, organizational learning is significantly linked with job satisfaction, work performance and organizational commitment. The job satisfaction and organizational commitment has a considerable impact on organization performance (Kanwal et al., 2017). As the organizational learning capacity is positively connected to business performance, this reveals that higher organizations learning capacity also leads to effectiveness (Rose et al., 2009). Different studies show that there is an association among organizational learning capabilities and organizational effectiveness (Yang, 2007; Rose et al., 2009; Ologbo & Chukwuekezie, 2013; Kanwal et al., 2017; Gillani & Kiani, 2018). Based on this discussion, this study offers the following proposition:

*Proposition 4: Organizational Learning Capabilities are positively associated with Organizational Effectiveness.*

*Relationship between Intellectual Capital and Open Innovation*

In present era, the concept of open innovation has gain attention worldwide. The fundamental idea behind open innovation is to extensively acquisition and distribution of knowledge, processes and inventions by means of building relations with external organizations and promoting joint research and development processes (Užienė, 2015). Now, it is mandatory for modern business organizations to open internal intellectual capital practices boundary with outsiders and also gain advantage of external intellectual capital (Chesbrough, 2003). However, Volna and Kohnova (2014) are of view that modern economy is based on the concept of “knowledge and innovative open society”. Accordingly, intellectual capital and its components are main input as well as outputs for innovation processes and use of open innovation in business processes provided more competitive value to intellectual capital of the organization (Laine & Laine, 2012; Michelino et al., 2014; Užienė, 2015; Davoudi et al., 2018).

Organizations with highly skilled and talented human capital have ability to effectively absorb and utilize external knowledge (Alexy et al., 2014). According to coleman (1988) high levels of human capital have capabilities to build and maintain attractive relationships with external partners or actors. Some researchers have showed that high level of human capital of an organization is related with open innovation (Alexy et al., 2014; Lenz et al., 2016; Piciocchi et al., 2018; Hong et al., 2019). Human capital is that component of intellectual capital which substantially changes itself according to increased knowledge flow within the organization (Užienė, 2015).

Proper working structure and systems for exercising activities inside any organization are prerequisites for implementation of innovation (Widener, 2006; Khan, 2016), which leads to effective organizational performance (Barkat & Beh, 2018). However, nowadays business organizations are focusing to take advantage by means of get access of external systems shared by partners. “Observing the behaviour of structural capital under the influence of open innovation, it can be seen that organizational value creation schemes go beyond organizational boundaries and acquire matrix form” (Užienė, 2015). Under open innovation, organizational internal systems and structures provide value to outsiders and also obtain opportunity to access systems shared by outsiders and gain advantage out of this to enhance organizational value (ibid).

Further, with the implementation of open innovation, external parties play imperative role for the development of organization. Accordingly,

organizations with open innovation have right to use knowledge that is difficult to imitate (Lenart-Gansiniec, 2016). Further, Fan and Lee (2009) in their research found that different components of intellectual capital have different effect on open innovation. The authors are of view that relational capital is the key driver for open innovation. The authors are of view that relation capital is the most important dimension for creation of open innovation in an organization (Fan & Lee, 2009; Mucelli & Marinoni, 2014; Russell et al., 2015; Lenart-Gansiniec, 2016). Based on the discussion above, this study offers the following propositions:

*Proposition 5: Intellectual Capital is positively associated with Open Innovation.*

*Proposition 5a: Human Capital is positively associated with Open Innovation.*

*Proposition 5b: Structural Capital is positively associated with Open Innovation.*

*Proposition 5c: Relational Capital is positively associated with Open Innovation.*

#### *Relationship between Open Innovation and Organizational Effectiveness*

Pertinent review of literature reveals an association among organizational innovations and organizational performance (Mazzanti et al., 2006; Noruzy et al., 2013; Zaied et al., 2015; Ali et al., 2016). However, open innovation is essential for firm performance, as open innovation is associated with successful innovation processes (Laursen & Salter, 2006; Liang et al., 2013; Oltra et al., 2018; Davoudi et al., 2018). Further, researchers are of view that organizations that implement open innovation instruments experience high performance and propose (Rass et al., 2013). Moreover, open innovation capacities (Inventive capacity, Absorptive, Transformative, Connective, Innovative and Desorptive capacity) directly or indirectly impact firm financial performance (Ahn et al., 2015). According to Mazzola et al. (2016), the organisational innovation is one of the important components which contribute in improvement of firm's performance and growth. Generally, most of the organisations adopt different types of innovation to improve performance and effectiveness for achieving a competitive edge (Hénard & Szymnsk, 2001). Huhtala (2019) states that different researchers have been investigated the relationship between innovation management and organisational effectiveness in different academic fields as economics, organization and management and

marketing. Alpkhan et al. (2010) in their study explored the relationship between innovation and performance. The authors are of the view that intellectual capital establishes innovation that leads to increased firm performance. Additionally, researchers (Scott et al., 2008) are of the view that organisational effectiveness is closely related to high performance.

Based on the discussion above, this study offers the following proposition:

*Proposition 6: Open Innovation is positively associated with Organizational Effectiveness.*

*Relationship between Intellectual Capital, Organizational Learning Capabilities and Organizational Effectiveness*

Presently, the knowledge-base industries are putting efforts to identify their core competences like intellectual capital to gain competitive edge, for increasing firm's profit as well as performance (Allameh et al., 2010; Ali & Ali, 2011; Moghadam et al., 2013; Inkinen, 2015; Sherif & Elsayed, 2016; Obeidat et al., 2017). However, practitioners and researchers are involved in exploring the link between intellectual capital and performance through some interceding apparatus which can help an organisation to manage its intellectual assets and transform these assets into organizational effectiveness (Wang et al., 2014; Mahmood et al., 2017). Such investigations by researchers enhance the significance of organizational learning capabilities in an organization (ibid). Research has shown that when organization focuses and employs resources for development of its intellectual capital, employees tend to enhance their learning capabilities, which in turn, enhances their abilities (Allameh et al., 2010) and consequently improves organizational effectiveness (Kanwal et al., 2017). Intellectual capital could generate positive behavior i.e. learning among employees (Hsu & Fang, 2009), which enhances employee performance (Moghadam et al., 2013). Further, scholars claim that organization's effectiveness depends on individual employee's performance (Fulmer et al., 2003) hence, it is necessary to improve performance of individual employees to enhance organizational effectiveness. Taboli and Zaerizadeh (2016) showed the linkages between intellectual capital, organizational learning and organizational performance. Amiri et al. (2010) considers organizational learning as an important resource of the organization and as such the organization that focuses on learning to create a strategic intellectual capital improves competitive advantage and effectiveness. Thus, the following is proposed:

*Proposition 7: Organizational Learning Capabilities mediates the relationship between Intellectual Capital and Organizational Effectiveness.*

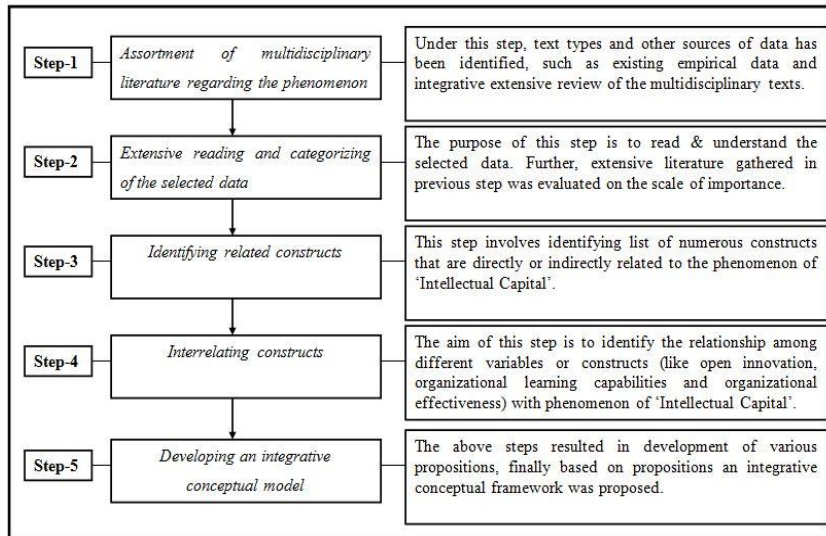
*Relationship between Intellectual Capital, Open Innovation and Organizational Effectiveness*

The term ‘performance’ in management’s literature is still largely in debate related to its scope and unambiguousness (Mention, 2012). Although, Venkatraman and Ramanujam (1986) outlined the term ‘performance’ with three major provinces: financial performance, business performance and organizational effectiveness. They also consider ‘Organizational Effectiveness’ as a broadest domain in the area of ‘Organizational Theory’. A review of the pertinent literature, however, recommends that implementation of innovation leads to higher productivity, attainment of sustainable performance, growth, efficiency effectiveness and also gains competitive advantage (Tomić et al., 2016). Consequently, modern organization should introduce a new category of innovation in business processes i.e. ‘Open Innovation’ which includes an extensive range of internal as well external innovation opportunities and also related to knowledge sourcing (Liang et al., 2013). According to Chesbrough (2003), such internal and external range of resources can help organizations to take advantage of new technologies available in the market through knowledge acquisition. Additionally, intellectual capital is a keystone of knowledge management theories that manage the tangible and intangible assets. Intellectual capital is closely associated with innovation activities. In the literature some of researchers mentioned the link of intellectual capital along with open innovation practices and also with innovation activities (Chahal & Bakshi, 2015; Delgado-Verde et al., 2016; Obeidat et al., 2017; Darus et al., 2018; Matos et al., 2019). Additionally, the authors are of the view that intellectual capital establishes innovation that leads to increased firm performance (Subramaniam & Youndit, 2005; Hsu and Fang, 2009; Alpkhan et al., 2010; Daud & Yusoff, 2011). However, Scott et al. (2008) are of the view that organisational effectiveness is closely related to high performance. So the study would look into the mediating role of open innovation between intellectual capital and organizational effectiveness. Thus, the following can be proposed:

*Proposition 8: Open Innovation mediates the relationship between Intellectual Capital and Organizational Effectiveness.*

## RESEARCH METHODOLOGY

With the purpose to obtain a comprehensive picture of intellectual capital and its relationship with organizational effectiveness, an integrative literature review from the area of human resource management, organisational behaviour and business management was carried out. Integrative literature review is a “form of research that reviews, critiques and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated” (Torraco, 2005). The approach taken entails pertinently reviewing of books, journal articles and conference papers addressing intellectual capital. This paper starts with a review of the concepts of intellectual capital, open innovation, organizational learning capabilities and effectiveness with particular reference to its use in the context of intangible resource management. On the basis of reviewed literature and theory, a combined view of relationships among intellectual capital, open innovation, organizational learning capabilities and organizational effectiveness was drawn. Finally, an integrative conceptual model was developed which can be used as the basis for further research and practice. However, the methodology used to develop the integrative conceptual model is composed of the following five main steps as mentioned in Fig. 2.



Source: Adapted from Jabareen (2009)

**Fig. 2: Steps in Research Methodology**

## DISCUSSION

Intellectual capital is a cornerstone for entrepreneurs, policy makers and managers which may help to manage intangible assets for enhancing organisational performance as well as help to attain competitive edge in the market (Khaliq et al., 2018). Presently, industrialized economies are becoming knowledge-based economies since the significance of intellectual capital resources which reflects organizations' real value has increased (Taie, 2014; Dumay, 2016). The highly competitive business organizations have realized a significant fact that such resources are crucial factor (Eid, 2018) for modern organizations. Lack of knowledge resources in an organization may lead to under-estimation of potential earnings (Asrar-ul-Haq & Anwar, 2016). Further, such under-estimations would have effect on firm's value and investment decisions (Kamaluddin & Rahman, 2009). The conceptual model shown in Fig. 1 integrate the key constructs (intellectual capital, open innovation, organizational learning capabilities) discussed in this article that can enhance effectiveness in an organization. The paper is mainly emphasizing on intangible assets of an organization. Unfortunately, numerous organizations still have focused on its tangible assets and expelled the imperative intangible factors; as such factors are harder to build up and required a long-standing focus and efforts. However, literature reveals that intangible assets or intellectual capital and its elements may influence efficiency and effectiveness of an organization.

Due to exclusion of intellectual capital within organisation, managers face much inefficiency in operations or activities of business. These types of organizations have focus only on improving the efficiency of tangible assets as these items can be easily measured, and assessed by the managers (Bontis et al., 1999). As a result, organization would face losses. Researchers (Riahi-Belkaoui, 2003; Wang & Chang, 2005) showed that intellectual capital is necessary for firms' continued existence and competitive success due to the considerable link between intellectual capital and organizational performance. The competitive success of firm mainly depends upon the strategic management of intellectual capital and less on physical and financial resources (Tseng & James, 2005). In summary, this paper has presented some important factors that a business organization needs to consider to enhancing organizational effectiveness and gaining competitive edge in the market and developed an integrative conceptual framework.

## MANAGERIAL IMPLICATIONS

With the previous discussion, primarily, this study combines literature on intellectual capital from various academic fields and conceptualized a comprehensive framework of intellectual capital, organizational learning capabilities, open innovation and organizational effectiveness. This study contributes in the literature of management field by exploring linkages between these constructs. According to the literature, it seems that most of the previous studies have mainly emphasized only dyadic approach among selected constructs for the study. This paper contributed a broader perspective for business organizations to enhance their organizational effectiveness. Further, this study offers a more comprehensive set of literature for managerial level of an organization to shed light on the role of intellectual capital in ways to increasing desirable organizational results. In line with this, research has shown that when organization focuses on its intellectual capital, employees tend to enhance their learning capabilities, which in turn, enhances their abilities (Allameh et al., 2010) and consequently improves organizational effectiveness (Kanwal et al., 2017). Intellectual capital could generate positive behavior i.e. learning among employees (Hsu & Fang, 2009), which enhances employee performance (Moghadam et al., 2013). Further, the relationship between intellectual capital and open innovation practices and innovation activities is observed in the literature (Fan & Lee, 2009; Laine & Laine, 2012; Sibhato, 2018). Furthermore, modern organization should introduce a new category of innovation in business processes i.e. ‘Open Innovation’ which includes an extensive range of internal as well external innovation opportunities and also related to knowledge sourcing (Liang et al., 2013). According to Chesbrough (2003), such internal and external range of resources can help organizations to take advantage of new technologies available in the market through knowledge acquisition.

## CONCLUSION

The conceptual model presented in this article reveals a comprehensible picture of different crucial variable that can influence performance and effectiveness of an organization. In present turbulent environment, organizations have to invest more in intangible assets than in tangible assets for creating knowledge-intensive environment in the industry and increasing effectiveness (Obeidat et al., 2017). In this context, intellectual

capital can act as an organizational tool to improve organizational value as well as performance (Musleh Al-Sartawi, 2017; Eid, 2018). This paper briefly discussed the concepts of intellectual capital, organizational learning capabilities, open innovation and organizational effectiveness. Extensive literature review reveals the associations among these constructs and therefore, this article has proposed an integrative conceptual framework on the base of past literature. Further, literature also discloses that organizational learning capabilities and open innovation play their inimitable role of mediation among intellectual capital and organizational effectiveness. This paper adds to view that intellectual capital and organizational learning capabilities and open innovation are the much-needed variables that can enhance effectiveness of an organization. The main purpose of this study was to scrutinize the linkages between intellectual capital and its dimensions, organizational learning capabilities, open innovation and organizational effectiveness. In broader sense, intellectual capital is a critical agenda for organizational effectiveness and open innovation and organizational learning capabilities are the factors that influence this relation in a positive manner.

## **SCOPE OF FUTURE RESEARCH**

The present study offers following recommendations for future researchers. First, under this article some propositions have been derived throughout the literature review process. This study recommended that such propositions should be empirically tested in different perspectives, culture and environment in future researches. Second, in testing the integrative model, different measures and methodologies can be used; as numerous measuring instruments are offered by literature related to the constructs mentioned in proposed model. In addition, the proposed model can be tested in different services as well as manufacturing industries and drive a comparative results among selected industries. Third, the present study basically focuses only on three main components of intellectual capital i.e. human capital, structural capital and relational capital. However, recently different authors develop some additional components of intellectual capital like social capital, technological capital and spiritual capital, which has not been taken into consideration in the present study. Thus, future researchers could investigate relationship between intellectual capital and organizational effectiveness through such components. Fourth, scholars can explore this relationship by taking constructs other than open innovation and organizational learning capabilities as mediating variables like

knowledge sharing, knowledge management capabilities and its processes, competitive advantage, dynamic capabilities, corporate governance and other variables. Lastly, the present research has used only mediating approach to explore the relationship among intellectual capital and organizational effectiveness. Further, moderating approach can add value to the present study. Variables like learning, innovation, demographic factor can be taken to examine this particular relationship.

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