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Review

Intellectual Capital and Innovation Performance: Systematic Literature Review

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Abstract: Over the years, several studies have been conducted to identify the impact of various intellectual capital components on the organizational performances. However, most of these works greatly replicated the applications and uses of different intellectual capital components (human, structural, relational, social) without addressing the shortcomings related to their empowerment toward the innovation perception of the organizations. Based on this fact, we comprehensively reviewed the existing literatures that strongly influenced the innovation performance of the financial sector. Standard inclusion and exclusion criteria were used for the critical and systematic evaluation of the past studies. It identified the main limitations of intellectual capital components efficiency in the financial sector that could considerably affect their desired innovation performances in the dynamic and competitive market scenarios. In addition, a correlation was established among the organizational growth of intellectual capital components and innovation performance, leading to positive implications on intellectual capital components development.

Keywords: human capital; structural capital; relational capital; social capital; innovation performance

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1. Introduction

In recent years, the synergistic effect of various intellectual capital components and success on the innovation performance emerged as a recurring theme in the field of economic growth, especially for the financial sector (Isanzu 2017). So far, fewer investigations have been performed to evaluate the influence of intellectual capital components on the innovation performance and growth correlation in the context of financial sector (Sveiby et al. 2007). The preservation of a successful innovation performance is determined by the efficient and reliable actions based on the organization's capacity to learn and adjust dynamically (Hsu and Wang 2012). For maintaining and gaining the competitive advantages in the financial sector, every organization must practice them with the emphasis on intellectual capital development.

Earlier reports revealed that intellectual capital components are the mental attributes based on facts, figures, and organizational experiences (Tastan and Davoudi 2015). It was argued that for improving the employees' knowledge, skill, and perception including the non-sensorial and intangible characteristics the intellectual capital can be exploited thereby acquiring the wealth via the business assets expansion (Ali et al. 2020c; Rindermann et al. 2015). Fundamentally, the definitions of intellectual capital vary according to its scale. Therefore, an organization's intellectual capital can be used to generate extra benefits or items that may be easily achieved through its employees. The possibility of using intellectual capital components in a customized way to generate valuable assets in a farm have been reported (Deltorn 2017) wherein it was hinted that intellectual capital components deficiency can limit the broader interest of an enterprise and expected value outcomes.

Considering the significant impact of intellectual capital components on innovation performance of the financial sector, this article exhaustively reviewed the existing literature to ascertain a correlation between intellectual capital components and innovation performance in the context of financial sector. The past development, ongoing challenges to empower the intellectual property in the financial sector and future trends of intellectual capital components based organizational growth are underscored. This systematic evaluation may enable us to achieve an in-depth understanding of diverse research variables and relevant background as indicated in the literature (Ali et al. 2020a; Allameh 2018a). Furthermore, this communication chronologically encompassed various studies to indicate the relevance of implementing intellectual capital components to enhance the innovation performance of the organizations. Most of the previous researchers discussed the effects of intellectual capital components on the organization's innovation performance without establishing a relationship between them (Asiaei et al. 2020; Scafarto et al. 2016; Agostini and Nosella 2017; Chowdhury et al. 2018). Some studies also displayed different views regarding the classification of intellectual capital into components and disagreed with the vital role of intellectual capital components on innovation performance (Chowdhury et al. 2018; Asiaei and Jusoh 2015; Bogdan et al. 2017). From this perspective, it became essential to establish a multi-level correlation amongst various intellectual capital components and innovation performance of an organization to generate new knowledge and develop better understanding on such relationship (Isanzu 2017).

It is worth mentioning the idea that innovation performance of any organization is crucial for achieving competitive advantages in terms of service or/and management quality, strategy formulation, creativity, and so forth (Li et al. 2019; Ferreira and Franco 2017; Wendra et al. 2019). Therefore, most of the studies involving the innovation performance in financial sector and focused mainly on the services and manufacturing sectors (Aluchna et al. 2018; Agostini and Nosella 2017). The observed close connection between the organizations' intellectual capital and innovation performance was further validated in the contexts of different regions and industries (Nevado et al. 2018). Despite all these efforts, a rudimentary insight of the intellectual capital and its impact as the knowledge resources for the value creation remains deficient. In this rationale, a systematic survey of the existing state-of-the-art studies was conducted to resolve two issues: (i) how do intellectual capital components affect the innovation performance in the financial sector? and (ii) what are the challenges faced by the financial sector to maintain a high level of intellectual capital for taking competitive advantages in the dynamic market scenarios?

This article is organized six broad sections. Section 2 described the methodology of this detailed review and Section 3 highlighted the research progression related to importance of intellectual capital components in the context of financial sector. Section 4 critically evaluated the earlier literary studies to reveal a close connection between intellectual capital components and innovation performance. Section 5 addressed the recent development, challenges, and forthcoming trends of intellectual capital components implementation for attaining improved innovation performance. Section 6 discussed the significant findings on intellectual capital components and innovation performance correlation and summarized the paper.

2. Methodology

As mentioned previously, the present critical evaluation of the previous findings enabled identifying a correlation between intellectual capital components and innovation performance in the financial sector (Dixon-Woods 2010). Furthermore, we compared various pertinent studies and addressed the emergent issues in the field of financial sector and recommended the implementation of intellectual capital components into their working culture for taking the competitive market advantages and thus enhancing the productivity (Borenstein et al. 2009). In order to answer the posed research questions, an in-depth analysis of the existing works were conducted based on the impacts of intellectual capital components on the innovation performance (Bracci et al. 2019; Mention 2012). The

identified ongoing debates related to the importance of implementing intellectual capital components in the organization and its effect on the innovation performance provided new insight and opened up avenues for further studies (Agostini et al. 2017; Qurashi et al. 2020; Agostini and Nosella 2017). In this regard, the present review article is distinct from the existing reviews, wherein the previous researchers usually summarized and interpreted the collected findings in a subjective and narrative (selected issues based on expertise) form (Manes-Rossi et al. 2020).

Generally, a review paper follows systematic literature review based on some logical and precise framework that is reproducible to serve as standalone document (Massaro et al. 2016). This allows us to minimize the logical mistakes and biases that originate from the subjective analyses and opinions. In other words, a review article is scientifically essential to provide rudimentary insights of the past works and add new knowledge in the database, showing the challenges and future trends (Pedro et al. 2018a). Due to this reason, articulation of review articles in the field of accounting, management and financial studies has gained renewed interests (Massaro et al. 2016). To achieve better knowledge and understanding, the financial sector worldwide has been exploring the intellectual capital format for improving their innovation performance. Motivated by the significance of intellectual capital components implementation in the financial sector as advocated in various recent studies (Agostini and Nosella 2017; Agostini et al. 2017; Qurashi et al. 2020) this paper followed a structured procedure executed in three stages as described below.

First stage, most of the scientific and relevant articles (published in English and peer-reviewed) were searched, analyzed critically and included depending on specific criteria to fulfil research goals (Cuozzo et al. 2017; Manes Rossi et al. 2016). Various keywords including ((("intellectual capital") OR ("intangible assets") OR ("human capital") OR ("structural capital") OR ("relational capital") OR ("social capital")) AND (("innovation performance"))) were used in this paper. These articles were collected using different databases such as Scopus, Science Direct, Emerald, and Web of Science during 2015 to 2020. It is needless to mention that a very limited number of articles have been published in the area of social sciences, business managements, finance, and accounts in this period. The research scope for peer-reviewed journal articles selection was further narrowed down (via systematic inclusion and exclusion criteria) to maintain the high quality (Higgins and Green 2009). Other resources including books, edited book chapters, editorials, conference proceedings, papers, and research reports were excluded from this review. It was acknowledged that (Gough 2007) such criteria can enhance the values and quality of judgment in terms of the evidences while revisiting the existing contributory works. A total of 862 papers were collected from various databases. Further, these contributions were manually searched to exclude any duplication, finally selecting 799 of them. Table 1 shows the salient features of the inclusion criteria.

Table 1. Inclusion criteria for literature review. Source: Own elaboration.

No	Criteria	Description
1	Title	Identification as a new research, meta-analysis, or both.
2	Topic	Literature directly related to the present study concepts.
3	Period	Peer-reviewed articles published during 2015–2020.
4	Research	Only empirical studies (quantitative and qualitative analyses) were included.
5	Transparency	Research methods from past studies must be explicit in terms of sample sizes, instruments, and analyses.
6	Reliability and Validity	Literature must have valid and reliable outcomes consistent with the study types and publication indexes.
7	Databases	Studies must focus Scopus, Science Direct, Emerald, and Web of Science databases.

In the second stage, the relevance (Petticrew and Roberts 2008) of these retrieved papers were assessed based on their titles, abstracts, and contents following some standard criteria. This evaluation was mainly centered on intellectual capital components format applicable to the financial sector, resulting in the exclusion of 523 articles. Furthermore, published papers that qualified the SCImago Journal Rank were considered, resulting in the exclusion of another six of them. The third stage involved complementing the selection procedure to achieve better sampling. The manual inspection of the leading journals that published articles on the finances and accounting practices enabled us to choose an extra 16 papers. Another filtering based on the full text was performed to exclude some less significant articles, producing 128 research papers that fit all the selection criteria. Briefly, a total of 128 articles were critically analyzed to present this paper. Figure 1 displays various stages of the reviewing process.

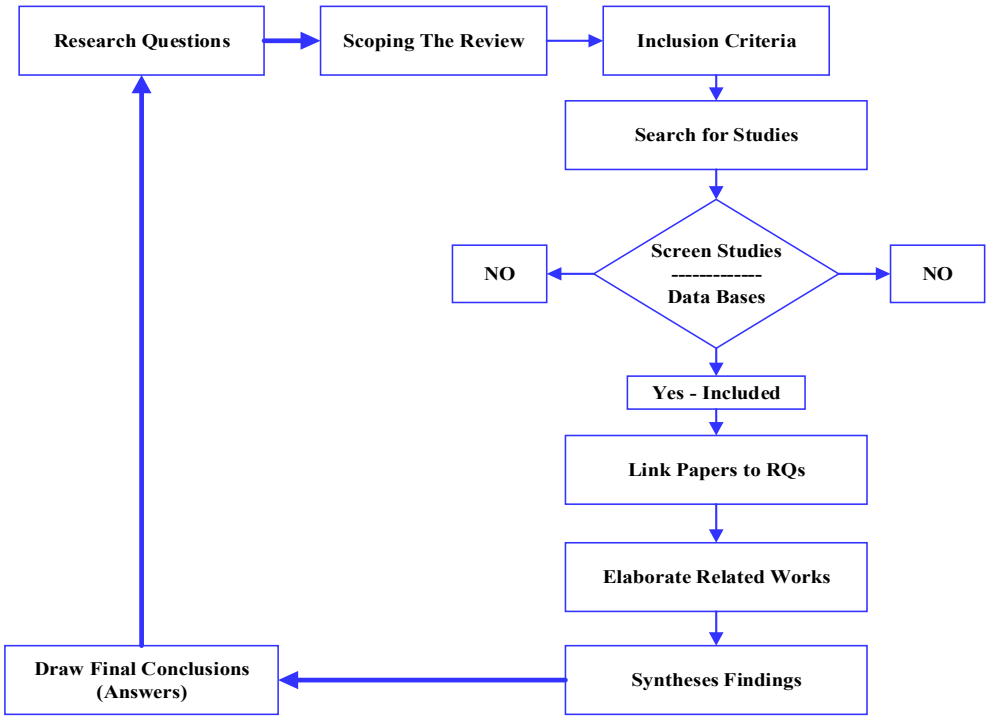

Figure 1. Various phases of the reviewing procedures. Source: Own elaboration.

3. Intellectual Capital Components

The notion of so-called intellectual capital was introduced by various scholars in their literary works (Coleman 1988) to describe the perspectives of the non-tangible assets that contribute to the organizational success. Later, the models related to the improvement of the non-tangible assets were developed (Sveiby et al. 2007) based on the strategic perspective. Since then, numerous studies have been carried out concerning the development of intellectual capital that mainly focused on the financial and accounting practices wherein different variables, structures, and measures were analyzed to determine the organizational dimensions (Ali et al. 2020d; Bontis 1998). Over the years, the researchers have started extrapolating the primary conceptual levels of the organizational non-tangible assets (Salicru and Perryer 2007). Many reports suggested different approaches to identify, classify and measure intellectual capital (Bontis et al. 2009). Some studies have defined the underlying concepts of intellectual capital as the expertise, knowledge, and relation of the soft assets in the organizations as a substitute for their physical capitals (Iivari et al. 1998). It was acknowledged that (Chen et al. 2015) intellectual capital can be defined as the human resource knowledge of the organizations that can be used for money-making or other useful purposes like providing the competitive advantages, enhancing the productivity and making long-term sustenance.

Being a non-intangible asset or informational resource of an organization, intellectual capital components can be used at its disposal for making profits, attracting customers, creating a new product, enhancing existing product or improving the business (Subramaniam and Youndt 2005). In essence, intellectual capital is viewed as the aggregate sum of the knowledge or set of intangible assets that the organizations can utilize to improve their operational performance (Vaz et al. 2019). Concisely, it is a multidimensional concept that includes the assets of experiences, knowledge and practical abilities for creating values in the organization (Lardo et al. 2017). It can be perceived as a non-monetary and non-physical resource that enables the organizational development by extracting the knowledge-based values (Ansari et al. 2016). The knowledge held by the employees of the organization is also called the development of its business processes, databases, systems, and relationships. To validate this idea, the effects of intellectual capital on the organizational performance were examined (Pedro et al. 2018a). Many studies have described and explained all the underlying intellectual capital components and provided a basis for understanding its actual meaning (van der Meer-Kooistra and Zijlstra 2001). It was also stated that (Dzenopoljac et al. 2017) intellectual capital includes wisdom, innovations and knowledge. The management, creation, measurement, and evaluation of the core intellectual capital are the essential indicators that determine the values of the corporate competitiveness (Jordão and de Almeida 2017).

Previous studies on the intellectual resources considered three major factors like intangible assets, capabilities for creating and modifying the assets, and social relationships within which all knowledge developments are established (Gallagher and Gallagher 2012). Each factor indicated a different concept of knowledge used in the organization for innovation performance (Cuozzo et al. 2017). Knowledge as an intangible asset of an organization represents the possession of investments, intellectual property rights, structural, human and customer capitals. Several issues are noticeable in the service industries due to the dominance of economies. Nevertheless, the less value-relevant intellectual property reflects poorly respected organization (Nimtrakoon 2015). Following the earlier suggestions, this paper focused on four dominant intellectual capital components (human, structural, relational, and social) (Cabrilo et al. 2018). Except social capital, the other three components was shown to affect the intellectual capital gains of an organization (Massaro et al. 2015). Thus, it is significant to distinguish human capital of an organization from its procedures. Essentially, the organizational procedures refer to various uses of the available resources by its employees at their respective workplace. Conversely, the information system refers to the implementation of the information technology while managing human knowledge (Užienė 2014).

Over the past two decades, many organizations worldwide have realized the necessity to develop intellectual capital components that constitute the basic ingredient in their business growth (Cabrilo et al. 2018). Meanwhile, intellectual capital is accepted as a key component to promote the assets of an organization that is responsible for the improvement of its products for taking the competitive advantages in the changing market environment (Mutuc et al. 2019). Generally, the entrepreneurs were found to be wrongly inclined towards intellectual capital. Therefore, it is mandatory to prepare the educational plans for managing the intellectual capital and rectify such an incorrect attitude (Secundo et al. 2018). In the current globally challenging times, intellectual capital must become a process for any organization that goes beyond routine jobs. According to Bogers et al. 2019, the use of the intellectual capital together with the innovation strategies can bring immense benefits to the organizations provided the abstract theoretical concept of intellectual capital is translated into real practices. It was further argued that when intellectual capital is managed effectively, it is potentially advantageous for mitigating various problems of the organization, providing a competitive advantage (Ferreira et al. 2020).

Of late, intellectual capital is becoming increasingly popular for the virtual economy worldwide (Kengatharan 2019). It was demonstrated that intellectual capital is the creative use of combined market strategies, intellectual property, human and intangible assets, and

the knowledge for producing the value chain (Secundo et al. 2018). In this regard, intellectual capital can be regarded as the market values minus the organization values (Mutuc et al. 2019). The organizational processes relate to how its employees make knowledge resources available in the workplace. Conversely, the information systems refer to the proper use of information technology for managing the acquired knowledge (Liu and Jiang 2020). Figure 2 illustrates the market value of intellectual capital as referred in (Sveiby et al. 2007).

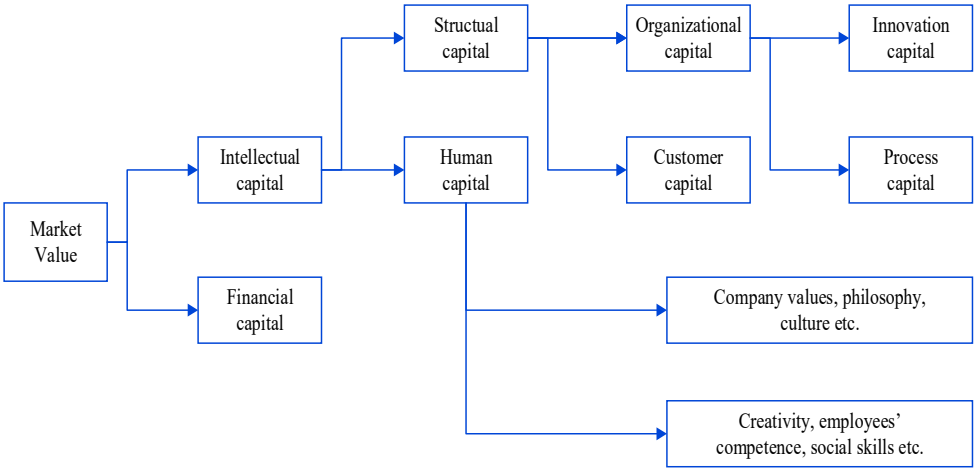

Figure 2. The market value of intellectual property (Sveiby et al. 2007).

Systematic studies showed that some aspects of intellectual capital from a multifaceted viewpoint are consistent with the desired objectives of the financial markets (Asiaei et al. 2020). Recently, there has been a growing demand to conduct empirical studies for gaining an in-depth knowledge about intellectual capital components due to their multidimensional traits (Cabrilo and Dahms 2020). However, appropriate hypotheses must be made and the effects of intellectual capital components on the innovation performance of an organization must be measured accurately to develop some comprehensive arguments regarding the proper management of various intellectual resources. The following sections provide a detailed description of the significant intellectual capital components.

3.1. Human Capital

In the modern world, with a knowledge-based economy, human capital has a driven value (Cuozzo et al. 2017). It has been argued that human capital is the primary resource or component in the value creation of an organization (O'Donnell et al. 2003). Prior studies on human capital examined human stocks such as skills, traits, and competencies. Meanwhile, some researchers have acknowledged the importance of relevant narratives concerning human capital (Asiaei et al. 2021; Nadeem et al. 2017). Thus, it can be described as the intangible assets that have been at the center of discussions over the last two decades in financial and accounting studies. Such imperceptible assets have posed various challenges for the governments, regulatory bodies and organizations (Zimmerman 2015). According to another study (Hsu and Wang 2012), human capital must include the training and development, entrepreneurial skills, equity, safety, relations, and welfare of the employees. In addition, human capital was classified as the expertise, knowledge, productivity, skills, values, expert networks and professional teams in an organization (Daou et al. 2014).

It was reported that (Massaro et al. 2015) human capital can be shaped up through the aptitude, competency, experience and skill of an organization's employees. In addition, human capital is vital for the foundation of an organization, as without it, knowledge cannot be created (Isanzu 2017). Thus, an organization can improve its human capital either by attracting some skillful persons from outside the marketplace or through the internal development of the existing employees' skills (Berezinets et al. 2016). Overall, the

skillful employees' retention plays a remarkable role in the innovation performance of any organization. An organizations is more likely to use its accessible resources instead of recruiting extra skillful employees with high salaries (McDowell et al. 2018). Earlier study revealed that the training could facilitate human capital development, significantly impacting the innovation performance and enhanced activities of small and medium size organizations (Pedro et al. 2018b).

Therefore, it can be asserted that human capital forms the heart of intellectual capital. It was also stated that in certain conditions, the continued competitive advantages can be ensued from collective human capital (Cabrilo et al. 2018). According to the resource-based theory, an organization evaluates the strength and weakness of its resources before choosing an achievable strategy. Consequently, human capital of an organization is regarded as an underlying strategic resource that can support its accomplishment because employees knowledge and skill are essential in the fast altering competitive market scenarios (Heaton et al. 2019). Briefly, human capital of an organization determines the worthiness of its manpower resource depending on the context of performance (Xu and Wang 2018).

The organizations with higher human capital such as education or skills was shown (Palazzi et al. 2020) to have superior entrepreneurial decision than others. It was inferred that with continual development of human capital, the employees can achieve performances, eventually enhancing the productivity of the organization (Massaro et al. 2015). Thus, the successful strategies should strongly focus on the competencies of human capital (Asiaei et al. 2020) that are linked to the acquired excellence of individual. The higher the human capital stock of an organization, the more successful it is, with higher competitive advantages (Budiarso 2019). Human capital increases with the accumulation of the employees' specialized information, skills, and knowledge, enabling their efficient communications. This in turn lowers the chance of miscalculation in decision making, thus enhancing the quality and improving the organizational performances (Alhassan and Asare 2016). To sum up, the human capital of an organization is strongly correlated to the development of its performance.

3.2. Structural Capital

The element structural capital of an organization can be defined as a scheme and pattern that enable to set up better productivity of the employees (Hammad Ahmad Khan et al. 2016) wherein such structure remain intact even after the exit of the employees (Edvinsson 1997). Fundamentally, structural capital can be viewed as the supportive and useful infrastructure of the organization (Wu et al. 2007). It includes the procedures, policies, and systems that enable the employees to achieve their optimum productivity, helping them to enhance their capacity and performance (Stewart 1997). In addition, structural capital involves both the infrastructural assets and codified information (such as records, databases, and intellectual property rights) that shape up the company's context for future sustenance (Buenechea-Elberdin 2017). The present work referred to the organizational concept of structural capital as the network properties and codified information dispersion within the organization (Sharabati et al. 2010).

It was affirmed that (Bontis 1998) structural capital holds the ownership of the intellectual property, which is very important for an organization in developing its human capital, implying that the structural capital is the way to add efficiency to the human capital to achieve optimum organizational performance (Hammad Ahmad Khan et al. 2016). In other words, a supportive environment is very important to exhaust human capital at its optimum level (Asiaei and Jusoh 2017). Structural capital provides supportive tools for human capital to strive for new opportunities (Chowdhury et al. 2018). In addition, structural capital can be considered the main contributor to a specific culture of an organization, which allows the manifestation of human capital during its operation (Widener 2006). Essentially, the structural capital serves as the knowledge directory shared among the employees working in an organization, enabling them to expand their capabilities to the maximum extent (Brown et al. 2007).

According to (Vladu et al. 2017), the information exchanges that make the reputable structure and procedure must conform with the developed and codified rules. Therefore, knowledge inherent to the structural capital tends to build up and must be used in a recognized manner (Budiarti 2017). Structural capital offers a setting that facilitates the organizations to produce and control knowledge (Benevene et al. 2017). An organization having weak systems and processes for tracking its activities may not achieve the targeted potential or goal in its performance (Sladjana Cabrilo et al. 2018). Conversely, an organization with a strong structural capital with compassionate culture can encourage its employees to attempt to discover state-of-the-art knowledge, thereby moving many steps ahead towards improved performance (Xu and Wang 2018).

Previous studies have suggested that the operational processes and commitment of the organizations help to provide sufficient resources that positively impact the performance (Mehralian et al. 2018). Furthermore, the operation, procedure and method of knowledge administration that propel the value-creative actions of the organizations have positive effects on the performances (Haris et al. 2019). Because the organizations are progressively using advanced technologies for competing with the current fluctuating economic conditions, extra care must be taken to properly manage the structural capital for attaining a good organizational performance (Al-Jinini et al. 2019). In this regard, the current study assumed that substantial investment in structural capital is anticipated to improve the performance of financial organizations. Previous studies indicated that an organization having weak procedures and systems for tracking its actions often fails to achieve competence regarding performance (De Luca et al. 2020). Conversely, an organization with a strong structural capital is expected to possess an encouraging work culture for employees that helps them to learn innovative knowledge with refined and improved performances (Asiaei et al. 2020).

3.3. Relational Capital

Relational capital is the capacity of a business or an organization for upholding its pleasant affiliation/union network with the partners (Cuozzo et al. 2017). Networking can be derived from both trustworthy and eminent suppliers and faithful and satisfied customers (Subramaniam and Youndt 2005). In addition, relational capital can be defined as the intangible assets based on the development, maintenance and promotion of high-class affiliations with any business, individuals and groups that affect the organization (Hsu and Wang 2012). Relational capital results from the interactions and collaborations among the employees within an organization through the knowledge and experiences they share with others (Elsetouhi et al. 2015), whereby constant change and innovation are driven by the interrelationships (Lamond et al. 2010). The relational capital of an organization can be defined (Ahn et al. 2003) as the resources connected to the outside relation with its customer, supplier, or partner.

It is the integration (Bonner and Walker 2004) of all the relationships of an organization that can be either internal (among administration and employees as well as amongst employees) or external (with stakeholders such as customers, suppliers and other bodies such as the government). Most of the organizations associated with the relevant and sensitive stakeholders such as customers/patients require direct intervention for the relational capital development. To reach this goal, good relationships must be established and improved between the main players to simplify/smooth out a way for obtaining better results or performance (Zollo et al. 2002).

The importance of relational capital relies on the ability to control programs, especially achieving complete recovery of the patients in the hospital/medication business (Lardo et al. 2017). In other words, the prolonged treatment and discomfort due to the side effects will make the patient likely to drop out of the treatment, thus declining the relational capital of the medical center. Hence, good management for the relational capital establishment is required. It was indicated that (Lenart 2015) maintenance of good relation with the customer and partner is a prerequisite for good organizational governance. Further

significant aspects that influence the relational capital are the feedback and recognition of the customer; the partner needs to offer satisfactory service and uphold healthy relations, thus improving the customers reliability (Scafarto et al. 2016). A conceptualized relational capital of an organization that is depicted as the foundation for cooperative actions in the society has evolved over the past decades.

The characteristics of relational capital may vary significantly between the relations, subject to review and resources used in the relations (Černe and Etinger 2017). Any enhancement in the relational capital of the organization is an indication of the excellence of its employees and enriched knowledge exchange with collaborators (Bontis et al. 2018). Various studies on relational capital suggested the performance of an organization can be improved by involving the customers having intimate relationships with the organization (Al-Jinini et al. 2019). Several manufacturing firms are engaged themselves in intimate relations with the suppliers to use their skill, capability, and knowledge for developing novel and low-cost products at rapid space (Vătămănescu et al. 2019). Thus, friendly relations with the suppliers can positively affect the innovation performance of a manufacturing organization (Cabrilo and Dahms 2020). Based on these factors, this study assumed that relational capital positively affects the innovation performance.

3.4. Social Capital

Social capital refers to a valuable asset that ensures societal security and protection, thus allowing the empowerment of the organizations (Nahapiet and Ghoshal 1998). It can be defined (Allameh 2018a) as "the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit". Additionally, social capital denotes the total potential and actual wealth associated with the networks of relations presented by the social units of individuals (Salicru and Perryer 2007). Various reports indicated that social capital plays a vital role in fulfilling all the organizational needs for their survival in the existing competitive scenario worldwide (Bolino et al. 2002).

Social capital is essential for knowledge sharing, competitive advantage enhancement, organizational performance improvement, value creation, and overall organizational development (Li et al. 2019). Different models have been developed concerning the organizational concept of social capital due to its multidimensional characteristics (Abili 2011). Some researchers have exemplified that an organization's significant breakthrough and competitive advantages are the cumulative outcomes of social capital due to the exchange of tacit and explicit knowledge through various networks within the organizations (Nevado et al. 2018). Thus, close attention must be paid to the development of the social capital of an organization to foster norms and values within the organization that enable healthy interactions, and facilitate strengthening of the relationships and collaborations among the employees (Christensen and Kowalczyk 2017).

It was acknowledged that social capital is an essential element for the innovation performance of an organization (Asiaei et al. 2020). Stable networks and healthy professional relationships can lead to higher levels of trust and goal accomplishment among members of the organizations, exhibiting a direct/positive relationship between their performance and sales growth (Hamad et al. 2019). Often, the internal and external collaborations and information exchanges across the social networks are essential in order to incorporate and synthesize the knowledge of the employees (Tseng et al. 2015). In this regard, it is perceived that social capital can be obtained from the network of relations of the individuals or social units (Stacchezzini et al. 2019). Some researchers believe that the outcomes of social capital could be gained through the exchange of tacit and explicit knowledge, mostly through the networks within the organizations, leading to their significant breakthrough and competitive advantages (Anifowose et al. 2017).

The main purpose of social capital is to empower the assembly and knowledge distributions across the value-chain of an organization, allowing interactions with other communities and businesses (García Lirios 2020). Meanwhile, it was mentioned that

(Asiaei et al. 2020) the maintenance of relations by the employees are more precious than these employees. It was asserted that (Liu and Jiang 2020) for businesses, social relations are more significant compared to the resources, especially in the environments with strong networking. Thus, social capital allows the acquisition and generation of new knowledge by means of exterior and interior resources. In this rationale, the problem-solving approach can be polished by improving social capital, enhancing the organizational innovation performance (Al-Musali and Ismail 2015). Figure 3 displays the architecture of intellectual capital components within relevant constructs enclosing dominant components.

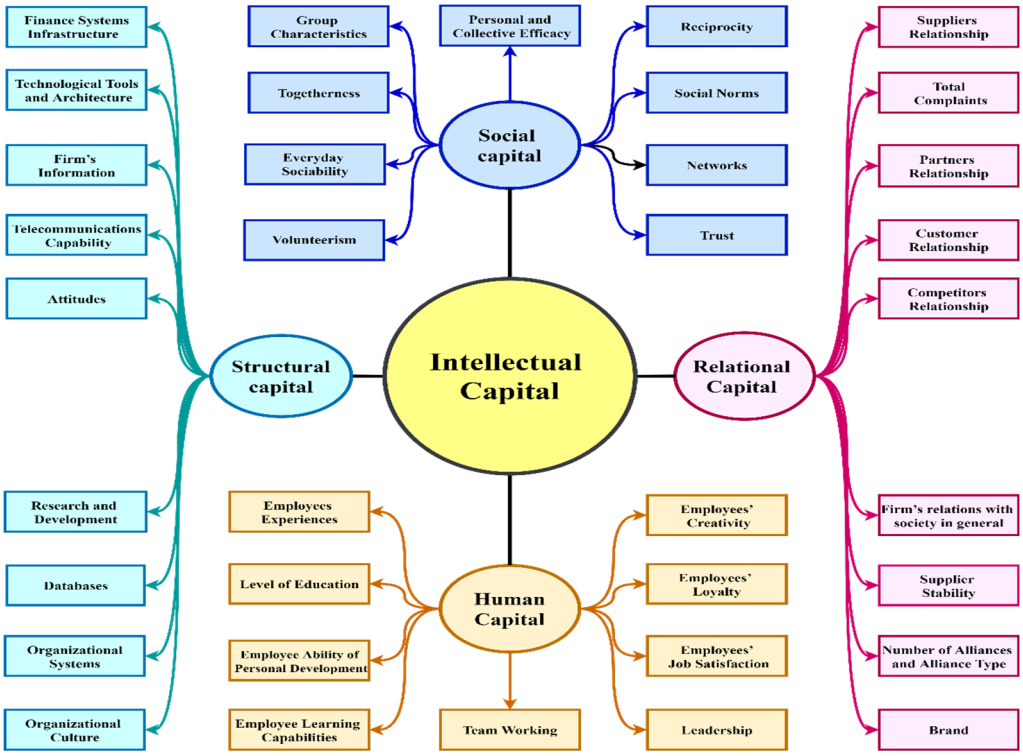

Figure 3. Structure of intellectual capital. Source: Own elaboration.

4. Innovation Performance

Innovation is considered the improvement or modernization in the creation of new ideas (Koryak et al. 2015) or the development and execution of better/professional work perspectives (Anderson et al. 2014). Thus, it materializes whenever individuals add some value in the commodities, services, processes, promotions, delivery systems, and policies which are incorporated to achieve companies benefits as well as stakeholders trustworthiness on the dealing companies (Shahzad et al. 2019). Thus, the present conceptualization of innovation performance aims to improve the value of the internal structures and processes of businesses, making new merchandise and better-quality service to fulfil the marketplace demands (Kamau and Oluoch 2016). (McDowell et al. 2018) agreed that knowledge and skillfulness of humans are the vital elements for the creation of innovations. Creative and knowledgeable employees generate new ideas or question the conventional programs that routinely run in the organization (Wang and Kafouros 2009; Wendra et al. 2019). The summation of the skillfulness and knowledge of human are the predictors for the organization's innovation performance s2018). In this regard, innovation performance is regarded as an intermediary variable among some corporate process and overall performance of the organization, thereby facilitating a better depiction of activities and impacts that need to be attained within the organization (Li et al. 2019). Earlier studies disclosed a optimistic correlation among innovation and performance of an organization (Jabbouri et al. 2016). In addition, innovation performance was considered as a conditional parameter for any organization that determines the ultimate productivity (Cabrilo and Dahms 2020).

It was demonstrated that innovation can be a vital stimulating factor that promotes the qualities, effectiveness, profits and efficacies of the organizations (Dženopoljac et al. 2016). To attain continuous innovations, administrators of the organization must focus on various aspects including the procedure, production and technology together with the culture, value and regulations (Marlina and Tjahjadi 2019). Indeed, innovation significantly affects the organizations' existence, competitiveness, and growth through its influence on customer satisfaction, employees' productivity, service quality, companies share, market value, and customer retention. Hammad Ahmad Khan et al. 2016 indicated that the innovation performance could increase sales and market shares with considerable customer satisfaction. Additionally, the innovation can potentially generate economic value for the organizations, thereby increasing the profits and improving the performance (Cabrilo et al. 2018). Briefly, the innovation performance of any organization can be described as the degree to which the improvement process can successfully generate the outcomes, leading to novel or significantly improved products or services (Rosenbusch et al. 2019).

The national innovation system demands constant knowledge creation and transfer; thereby, innovation occurs and contributes to the economic growth of the country (Inkinen et al. 2017). Additionally, the innovation performance of the organizations is effective for promoting the capacity of the national innovation system (Hameed et al. 2018). In a national innovation system, innovation performance is considered synonymous with all the activities that enable measuring the technological innovation outcomes (Alford and Duan 2018). According to Amin and Aslam 2017, the productivities such as patents or number of state-of-the-art goods may be useful for measuring the innovation performance of the organization. It was also argued (Hameed et al. 2018) that the product development cost is a significant determinant for the innovation performance in the financial sector because the organizations invest substantial outlays to develop state-of-the-art goods, thus acquiring a competitive advantage in the targeted markets (Rosenbusch et al. 2019).

Several studies were conducted to evaluate the performance on financial measures that could be related to the primary objective of innovation in new product and service to increase the profits (Bogers et al. 2019). Performance indicators discussed in the literature are measured largely by the organization's financial outcomes; however, there has been a revolution in performance measurement in the last ten years. The success of an innovation is seldom defined by a sole factor rather by several aspects. (Alford and Duan 2018; Isanzu 2017) argued that not a single factor but rather several aspects measure the success of innovation performance. Nevertheless, several aspects of the innovation such as increased customer loyalty are neglected by using only financial factors (Isanzu 2017). Measurements that rely only on financial data are being placed by integrated system which combines both financial and non-financial aspects (Rosenbusch et al. 2019).

Studies on innovation performance in recent years have received focused attention due to its multidimensional nature. It was indicated that (Gimenez-Fernandez et al. 2020) for the enhanced economic advancement, innovations and productions play a significant role. Therefore, the national innovation systems particularly the financial sectors require constant knowledge creation and transferring. The innovation was shown to contribute to the economic progress in the developing nations (Samson et al. 2017). Basically, innovation performance is effectual to promote the development of national financial system capacity in relation to various intellectual capital properties (Kamau and Oluoch 2016). It was asserted that (Amin and Aslam 2017) the detail information related to the sectoral aspects remains deficient. So far, fewer studies have been conducted to reveal a close connection between innovation and growing value of the performance in the financial sector. In order to increase the economic share a significant workforce is required for the expansion of company (Babelytė-Labanauskė and Nedzinskas 2017). In addition, the studies on the practical operations related to the successful of innovation performance in different economic subsectors are lacking (Shahzad et al. 2019). From the abovementioned discussions, it is clear that multidimensional services and viewpoints that constitute the innovation require further systematic analysis to develop a correlation among intellectual capital components

and innovation performance (Buenechea-Elberdin et al. 2018). Thus, this paper contributes to the financial sector by emphasizing the impacts of intellectual capital components on innovation performance.

5. Challenges of Intellectual Capital

An attempt is made to improve the understanding concerning the importance and implications of employees' intellectual capital components in the financial sector. This knowledge is relevant to attain better innovation performance in the financial and accounting practices of different organizations. Due to the deficiency in number of papers in the cited topic, this article may not fully clarify or explore the issues related to the impacts of intellectual capital components possessed by the employees of an organization on its innovation performance (Abdullah et al. 2015; Ramadan et al. 2017; Aminu and Mahmood 2015; Singh and Rao 2016; Thanh Nhon et al. 2020; Jordão and de Almeida 2017; Pedro et al. 2018b; Asiaei et al. 2020; Wendra et al. 2019; Li et al. 2019). Hence, the article reviewed the previous works systematically to validate the claims concerning the shortage of intellectual capital practices and its necessity for innovation performance of an organization (Souza and Takahashi 2019; Alonso and Kok 2020; Breznik et al. 2019; Khan et al. 2021; Furnival et al. 2019). In addition, it focused on the impacts of those capabilities in developing innovation performance in the financial sector. The main objective is to uncover the theoretical perspectives and practical impacts of intellectual capital components in terms of scientific, and statistical measures, thus developing a better understanding of intellectual capital components and innovation performance relationship. The challenges faced by various organizations to develop the intellectual capital components are also highlighted (Cenciarelli et al. 2018; Sardo and Serrasqueiro 2017; Januškaitė and Užienė 2018; Tran and Vo 2018; Ramírez et al. 2017; Engelman and Fracasso 2017).

No studies have been carried out to accurately quantify the impact of intellectual capital components on innovation performance of an organization, although it was hinted that several factors of the financial sector are responsible which inhibit the exact measurement of the possession of its intellectual capital properties. First, appropriate inputs regarding the intellectual capital property of the employees are needed for formulating and implementing the strategies of intellectual capital development. Because plans and strategies are required for making decisions and updating the prevailing reporting procedures that incorporate data related to intellectual properties. Last, precise assessment of intellectual property requires constant investigations to improve innovation performance in the financial practice. All these challenges made the financial institutions unable to develop the intellectual capital properties for their employees. Thus, proper measurement tools are required to quantify the full capacity of intangible capital of an organization that leads to it growth and value creation.

The difficulty of determining the real contributions of the selected organization and validating the levels of intellectual capital property of its employees are underscored. It was affirmed that (Giuliani 2016) the presence of sense-making and sense-giving processes may not produce accurate results because of the complexity of the relationship between intellectual capital components. Some reports (Otcenášková and Bureš 2018; Vaz et al. 2019) indicated that despite the availability of empirical suggestions on the differences in resource distribution among intellectual capital components, the advantages associated with each intellectual capital components, as well as their complexity and diversity towards solving these issues, are yet to be addressed in research studies (Ali et al. 2020b). Therefore, the level of intellectual capital components can positively impact the financial performance, making accurate measurement of intellectual capital components challenging. It has been suggested as future works in many studies since the measurement of intellectual capital in any organization implies the measurement of the performance and productivity in the organization, specifically the financial sector.

6. Conclusions and Limitation

This communication has provided evidence that intellectual capital components can immensely contribute to the innovation performance of financial organization wherein inclusion and exclusion criteria were used in the reviewing process. It explored various relevant constructs based on multidimensional views of the financial sector in terms of three aspects. First, possession of intellectual capital components by a financial organization was shown to improve its innovation performance via the interaction and combination of appropriate constructs. Second, this relation was frequently explained as separate indicators for overall economic growth of the company. Last, strong practical implication was found to exist concerning the impact of intellectual capital components on the organization's innovation performance and other qualities of improvements. It was inferred that the diverse challenges encountered by the financial sector to maintain a high level of intellectual capital can be mainly due to the deficiency of appropriate measurement methods (Meles et al. 2016; Mention and Bontis 2013). Only a few reports in the literature analyzed the issues related to the development of various intellectual capital components (human, structural, relational, social). In this respect, this article substantiated the outlook that appropriate constructs must be combined to maintain high innovation performance in the financial sector. This enables us to obtain a better understanding of the knowledge-based interpretation of innovation performance, emphasizing the need for assessing the impact of intellectual capital components in the financial sector to gain competitive advantages (Sharma and Dharni 2017; Abhayawansa and Guthrie 2016; Anifowose et al. 2018).

To determine a significant correlation amongst intellectual capital components and innovation performance in the financial sector various concepts must be combined. As revealed by many empirical studies, proper implementation of intellectual capital components concept in the banking sectors in different countries was found to contribute positively on innovation performance (Forte et al. 2017; Cabrilo et al. 2018; Mention and Bontis 2013; Meles et al. 2016). Although the research interests on the significance and measure of intellectual capital components development in the financial and accounting fields have been increasing, quantitative studies on intellectual capital components and innovation performance correlation are limited. Therefore, it is essential to foster some novel empirical and theoretical method to evaluate effects of intellectual capital components on the organization's innovation performance, wherein, smart and combined plans can be useful to manage various intangible assets, promoting the sustainability, economic prospects and productivity of the regions. Amongst all the intellectual capital components, human capital was observed to contribute the most in achieving a high level of innovation performance. It can be concluded that knowledge-based interactions of the employees of an organization lead to more productivity, new values and wealth creation, helping the company to take competitive advantages and become more sustainable.

Based on the limited number of available journal papers of national and international repute, this review established three major aspects. First, a rudimentary insight concerning the positive effects of intellectual capital components on the financial company's innovation performance was provided based on multi-dimensional analysis of the existing state-of-the-art reports. Second, it may serve as taxonomy for the researchers navigating into the field of intellectual capital components and innovation performance correlation. Third, this in-depth analysis on the identification and implementation of intellectual capital components in the financial sectors (public and private) may facilitate their managers to make wise decisions and meticulous strategies using the intellectual capital perception to control qualities of services and productivity, leading to improved innovation performance. Additionally, for the first time, we emphasized the necessity to strengthen the empirical investigations at the regional and national levels to accomplish better understanding of intellectual capital components and innovation performance relationships.

In brief, this paper has demonstrated the significance of the innovation performance assessment of an organization, based on the interactions of four intellectual capital components. It was found that the level of intellectual capital is intimately related to their

degree of uses. It was shown that financial organizations' reliance on intellectual capital components had a strong impact on their innovation performance in the banks. Intellectual capital components of any organization are useful maintaining knowledge-based wealth, trustworthiness and values. Thus, it is recommended that various organizations worldwide must emphasize intellectual capital components development for long-term sustenance and value-chain creation. Furthermore, the national and regional public policies must be reformed to include the aspects of intellectual capital components for their economic growth.

Undoubtedly, intellectual capital is a significant factor for the creation of values in the organization, region and nation, wherein strong participation of government is required to obtain easy access to data information and structure. This will not only enhance the articulation of knowledge transfer among the academics and the public, but will immensely help the organization's administrator and policy makers to improve the performance and values. We only focused on the reported empirical studies, which is the main limitation. The other limitation was related to the deficiency of efficient analyses of various indicators used to measure the obtained samples. It is claimed that to obtain more knowledge of intellectual capital components' impact on innovation performance, it is worthwhile to focus on the national and regional systems which may contribute considerably to the policies of organizations. This in turn will facilitate in fostering the intangible asset-based improved performance, efficient governance to make the organization more competitive and sustainable.

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