

## INTELLECTUAL CAPITAL AND ITS IMPORTANCE TO THE PUBLIC SECTOR

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**Abstract:** *The significance of intellectual capital becomes one of the main topics recently reviewed through various studies due to its significance for industries, countries, sectors and organizations. Despite these studies, focus on intellectual capital in public sector is sadly lacking. The ones covered do so only in terms of the significance of public sector contribution to GDP in the economic sector. At the same time these studies are deeply dependent on the knowledge, benefits, and the generation of capacity in its service delivery. Hence, the major goal of this study is to show the importance of intellectual capital in the public sector through critical review of literature.*

**Keywords:** *intellectual capital, public sector*

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### 1. Introduction

Good organizational performance means that the public sector organization is effective and efficient in providing public goods and service. Therefore, the reform of public sector has the aim to make and ensure that procedures and government structures are effective, in order to realize programs and development policies for the benefit of citizens (Bhuiyan & Amagoh 2011). Nevertheless, modern public sector management is interested with the existence of public attention on public and service quality, and this aspect justifies the need to include intellectual capital as a new approach to helping efficiency and effectiveness in the public sector (Ramirez 2010). Hence, the intangible elements are becoming the most important in public administration. Nowadays, the mass knowledge of an organization is of top importance in knowledge economy (Kong and Thomson 2009). Besides, in the

modern period, organizational resources especially intangible are the most important in sustaining topmost situation. Further stated, intellectual capital is considered as a significant source for competitive advantage for an organization. (Chahal & Bakshi 2015). Moreover, in the public sector intellectual capital becomes more important because public sector management in fact is intangible more than private organizations. Always the public sector has been focused on intensive human capital and intangible outcomes (Wall 2005). Furthermore, the public sector cannot be isolated from the changes that are taking place in the current context of the so called knowledge based economy where wealth generation is associated with the development and management of elements of intangible nature. Moreover, the importance of implementing the intellectual capital in public sector is because it is considered that intangible resource is more present in the public administration agencies than in private agencies (Ramirez 2010). Furthermore, the core competence theory is associated with some of the roots of intellectual capital. Accordingly, intellectual capital is able to adapt to the challenges posed by environmental non-profit within the knowledge (Mouritsen, Larsen, & Bukh, 2005).

## 2. Intellectual Capital

Most definitions of intellectual capital do not have standard definitions which consist of similar words such as: intangible assets, skills, experiences, knowledge, processes, information, and value creation (Engström, Westnes, and Furdal Westnes 2003). Moreover, in general the nature of intellectual capital is multi-specialty covering different things such as: finance, strategy, marketing, human resource, accounting and economics (Morariu 2011). Hence, the notion of intellectual capital means various things to various people. The summary of intellectual capital definitions below as shown on table 1.1.

Table 1.1

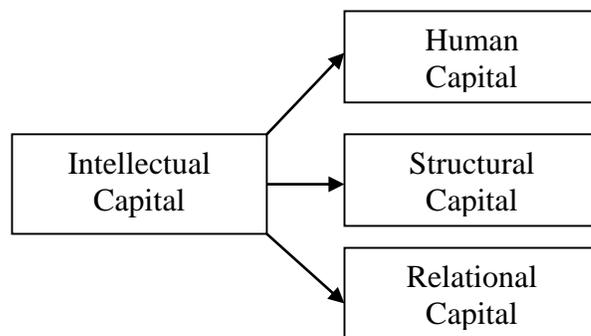
*Intellectual capital definitions*

Author (Year)	Definition
Cortini and Benevene (2010)	Intellectual capital refers to resources and the assets of non-tangible items that consist of patents, innovation capacity and processes, besides, network of collaborators, contact and tacit knowledge for the members in an organization.
Cabrita and Bontis (2008)	Intellectual capital indicates to Knowing assets which can be turned to value through a contact and combination between groups of competencies and experience internal and external for the organization.
Yalama and Coskun (2007)	Consist of all intangible assets, the value of information, knowledge, intellectual experience, and intellectual property that affect major factors for future value of the company
Bontis (2001)	It is defined as intangibles or knowledge assets or intangible assets.

Wang and Chang (2005)	Confirm that intellectual capital helps organizations to enhance value and competitiveness.
Stewart (1997)	Refer to a group of information, knowledge, experience owned by everyone in an organizations and intellectual assets that are used to create and improve competitive advantage.
Edvinson (1997)	The notion of intellectual capital is to refer to a number of intangible assets like competencies, capabilities and resources that increase performance of organizations and create a value.

### 3. Intellectual Capital Components

According to, Toth and Jonas (2012) the vast majority of academic research in the field of intellectual capital include three broad dimensions, such as: structural capital, relational capital and human capital (Martín-de-Castro, Delgado-Verde, López-Sáez, and Navas-López 2011; Sharabati, Jawad, and Bontis 2010; Curado 2008; Subramaniam and Youndt 2005). Also similarly, according to Dalkir, Wiseman, Shulha and McIntyre (2007) intellectual capital consists of three major components: relational capital, structural capital, and human capital. In contrast, other researchers mentioned different dimensions of intellectual capital for instance: organizational capital, process capital, innovation capital, customer capital and social capital (Chen 2008; Zhou and Fink 2003; Dzinkowski 2000). Further research added, ways in which these dimensions are interrelated with the three major dimensions of the intellectual capital. The figure 1 below describes intellectual capital components.



*Figure 1 the components of intellectual capital*

### **3.1 Human Capital**

The importance of human capital is considered as a comprehensive concept, and these factors are the basic resources and assets that represent the value of the organization (Schiuma *et al.*, 2008). Also, human capital is about renewal and innovation of strategies (Cabrita & Bontis, 2008). On the other aspect, human capital concept is the total of skills, capabilities, tacit knowledge, the workers' and experience (Edvinsson & Malone, 1997). According to, Schiuma *et al.*, (2008) human capital refers to behavior of employees, intellect, talent, skills, knowledge, attitude and relationship (Schiuma *et al.*, 2008). Human capital indicate to group of ability of the organization's individuals and innovativeness, knowledge and skills (Bontis, 2001). Human capital refers to creation of value adding processes and organizational work by the employees, including employee motivation and leadership ability and professional competence, skills which people possess and knowledge, experience (Halim, 2010; Li & Chang, 2010).

### **3.2 Structural Capital**

According to, Ghosh and Mondal (2009) Structural capital consist of all nonhuman storeroom for organizations of knowledge which consist of process manuals, databases, routines, strategies, organizational charts and anything higher than its physical value for firm. Also, structural capital consists of two categories: products of knowledge conversion and outcomes, for example, databases, documents, the intellectual properties and process descriptions of the firm, for example; service marks, trade secrets copyrights and patents and trade (Kianto, Hurmelinna-Laukkanen, & Ritala, 2010).

### **3.3 Relational Capital**

The definition of relational capital is the knowledge included in relations with customers, industry associations, suppliers and several of stakeholders which impact on the life of organizations through provide and add value to improve organizational performance (Cabrita and Bontis 2008). Besides, relational capital indicates to the capacity of the organization to positively interact with outer stakeholders. Also it indicates resources that are linked with outer relations of firm, for example: partners, the local society, its relations with customers and suppliers (Kianto, *et al.* 2010).

#### 4. Elements of Intellectual Capital

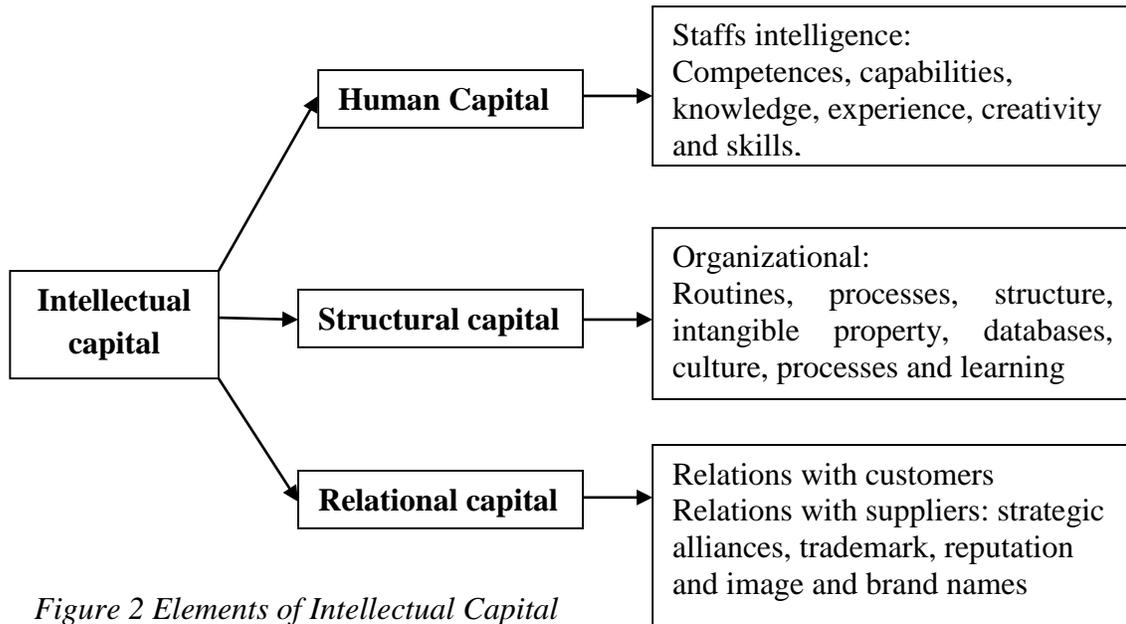


Figure 2 Elements of Intellectual Capital  
Source: Toth and Jones (2012)

#### 5. Benefits of Intellectual Capital

The main benefit of intellectual capital measurement is to meet invisible assets and its growth strategically to achieve the objectives of organizational, benefits also include, increased staff self-perception, innovation, motivation, besides, creates a performance oriented culture of the organization (Kannan and Aulbur 2004). Moreover, to evaluate strategy achievement and use these as a basis for compensation as well as assist in the formulation of the organizations strategy (Marr, Gray, & Neely 2003).

#### 6. The Public Sector and The Importance of Intellectual Capital

According to (Guthrie, Marcon, Russo, and Farneti, 2014; Dumay, Guthrie, and Farneti, 2010) in most economies and in any country in the world the public sector contributes a significant percentage of GDP (Guthrie, and Dumay, 2015). In addition, it has been recognized that intellectual capital is a significant resource through which organizations need to improve to earn a sustainable competitive advantage (Chen, 2008; Kong and Prior, 2008; Schiuma and Lerro, 2008). Moreover, intellectual capital in the public sector is important, because in fact management in the public sector is more intangible than in the private organizations, because public administrations tend to achieve several goals of a nonfinancial, also, between productive resources for example: knowledge, raw materials, machinery and human resources, in addition, public administration entities intensively use the two first ones which are intangible, in addition, public administration product is a service, hence this is considered essentially intangible (Serrano Cinca, Mar Molinero, & Bossi Queiroz 2003). Furthermore, According to, Ramirez (2010) confirming that the intellectual capital will allow to help administration managers in their activities, and achieve efficiency

and effectiveness in public services in the public sector also will allow citizens the evaluation of their activities that the administration carries out in order to improve the satisfaction of citizens and to increase their wellbeing.

Another aspect, Ramírez (2010) argued, in line of Guimet (1999) believes that the concept of intellectual capital management can be developed more quickly by public administration organizations than by the private sector, the following reasons:

- Manages public administration, principally, information and knowledge.
- In most countries public administration is currently under a process of reforms and integrating more models of effective management and more focused on the citizens.

On the other hand, through review of literature and previous studies conducted in many countries it is seen that conceptually and empirically, the relation between intellectual capital (structural capital, relational capital and human capital) and performance with various organizations, firms, products, innovative, service, in various sectors, one of them public sector that have the majority result has positive and significant. For instance: Kamaruddin (2013) discussed the relationship between intellectual capital and Malaysia public sector performance. The result showed a useful contribution and a significant and positive impact through review of the intellectual capital. Ramirez (2010) studied on intellectual capital models in Spanish public sector. He found that there is a significant intellectual capital in public sector as tools to overcome the new and emerging challenges.

## **7. Conclusion**

The public sector cannot be isolated from the changes that are taking place in the current context of the so called knowledge based economy where the wealth generation is associated with the development and management of elements of intangible nature. Moreover, in the public sector, the resources used or the objective of the administration or the output the majority services are more intangible assets, therefore is considered to be the ideal area to implement the theories of intellectual capital. In addition, intellectual capital becomes one of the important topics recently reviewed through various researchers in different organizations, industries, sector and countries. Therefore, the intellectual capital indicators can become a main instrument to gaining competitive advantage. As well as the modern public sector management is keen of public attention and service quality, which justifies the need to include the intellectual capital as a new concept to helping efficiency and effectiveness in the public function within the public sector.

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