Journal of Business and Economics, ISSN 2155-7950, USA
August 2021, Volume 12, No. 8, pp. 835-846
DOI: 10.15341/jbe(2155-7950)/08.12.2021/003

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Intellectual Capital: Contributions to a Brief Literature Review

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Abstract: The main purpose of this paper is to know what a selected set of 22 authors of literature says about the intellectual capital, says about it, in a neat way. This is part of the problem, related to this same topic, according to the approach, which constitutes the main problem, that is, the definition-measurement-value triad. Thus, it is a matter of knowing the authors, which papers they published, which countries they belong to and, above all, what they say in their content. In the end, knowledge becomes more synthetic and scientific knowledge more readable and concentrated on paper, easily accessible. The methods used are eminently quantitative, once based on primary and other secondary data.

The main conclusion that can be drawn is that the definition-measurement-value triad, sequentially interrelated, regarding to the intellectual capital, in the selected literature, although it has merit, per se, makes disparate and dispersed contributions, not encompassing the 3 elements and, therefore, not allowing, in a single way, to present a concrete value, and replicable to a set of different situations in order to be able to know the different assumed and compare them.

Key words: intellectual capital, definition, measurement, value
JEL codes: J24, J41, M54

1. Introduction

The research question in this paper is as follows: what does the relevant literature says about the intellectual capital (in the context of intangible assets) according to a collection of 22 authors selected for the purpose?

Regarding the topic of intangible assets, properly speaking, a set of questions emerge from among which it points out as being one of the most important, if not the most, that of knowing how they can be measured and calculated its value. At the same time, the question arises as to how to define these same intangible assets. Therefore, it can be said that, within this category of assets, a problem arises in which a wide range of authors seek to answer. However, it is emphasized, in special, that this same problem, more precisely, focuses on the context of the so-called the intellectual capital, more properly. This expression, according to Örnek and Ayas (2015), was used, for the first time, by the American economist John Kenneth Galbraith, in 1969, in a letter addressed to another economist, Michael Kalecki and, in the year from 1991, started to be used frequently, from an article published, by Tom Stewart, in the *Fortune* magazine.

Why is the intellectual capital so important in the present? First of all, due to the fact that it is a privileged source for creating competitive advantages for companies and, in this way, for countries. Associated with these, a

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set of issues arise that are related to the creation of (added) value by companies in the production of goods and/or services provided that appear as more perfected and sophisticated, to the greater intra and extra competitiveness of economies' activity sectors, greater distribution of income, less inequality of income and greater Welfare for both citizens and the wealth they produce in their respective countries. In addition to all of this, innovation, creativity and greater business performance, higher market shares and dominant positions of companies, implicitly or explicitly, with spillover effects, to a greater or lesser extent, by all economies' activity sectors of the countries. In short, the true *Wealth of Nations* that Adam Smith (1723-1790) spoke of and the *Comparative Advantages* of which David Ricardo (1772-1823) spoke, benefiting all from the exchanges made possible by international trade.

It should also be noted that, according to Gouveia and Couto (2017, p. 28), in today's world, it is an *old* reality, but one that knows plurifaceted manifestations and that, yes, make the reality *new*.

Thus, this intangible asset, the intellectual capital, in particular, constitutes the main problem, that is, the definition-measurement-value triad, interrelated in a sequential manner, where authors such as Berzkalne and Zelgalve (2014) and Gogan and Draghici (2013), in addition to Zhicheng et al. (2016), Gouveia e Couto (2017) and Gouveia and Pinto (2017), in special, seek to provide an answer, often in isolation, to each of these 3 components.

From the outset, this specialized literature does not have a single answer that can be considered as bringing together the consensus of the specialized and non-specialized scientific community. It is, therefore, a gap whose contributions to date (September 2020) are far from satisfactory. Hence, it constitutes a source for an in-depth scientific research, the most important work of which is yet to be made, despite the contributions already made and known. In these same contributions, it should be emphasized that the methods (or methodologies, if one prefers) are invariably of a quantitative nature, insofar as they analyze specific phenomena or cases as they are, of the business world. Sometimes they are based on primary data (interviews with sample constituents formulated for this purpose, as in Kalkan et al. (2014)) and other times on secondary data (such as Berzkalne & Zelgalve, 2014) from information already available and can be used for various purposes by researchers.

Regarding to Berzkalne and Zelgalve (2014) and Gogan and Draghici (2013), the focus is on how to define the intellectual capital. These, even though they have definitions of it, which coincide in some aspects, in their components that integrate it, reveal marked divergences, in such a way that the definition is disparate. In fact, with regard to Berzkalne and Zelgalve (2014), the intellectual capital is the sum of 3 components: human capital, structural capital and capital employed. As for Gogan and Draghici (2013), they define with 3 components, the first 2 being coincident (convergence) but the third is different (divergence) being called client capital. Other authors, such as Sekhar et al. (2015), in their respect for the definition of the intellectual capital, include the first two components, but add two new ones: relational capital and innovation capital. Gouveia and Couto (2017) are, still, two other authors who present another perspective of definition on what to understand by the intellectual capital that is inside in a new context: that of knowledge assets. Therefore, they integrate this type of assets, as being constituted by the components: human capital, intellectual capital, social capital and territorial capital.

In short, it is more than notorious the lack of consensus in the scientific community that allows for a generalized definition of the intellectual capital and that brings together the consensus of the same. This absence of consensus is materialized in the definition, that is, in the meaning of the same, or in the components that integrate it. Consequently, defining tools or indicators or methods that allow measuring the intellectual capital and, in this way, measuring the value of the intellectual capital, proves not to be feasible, as a whole, since it has its beginning in the constituent parts of triad mentioned above. It should be noted that, even the measuring

instruments themselves, in part, are unknown, linked to a basic definition and, consequently, the calculation of the intellectual capital value at a certain point in time is prevented. Thus, the triad, while constituting the main problem, also constitutes, simultaneously, the 3 pillars that, around the intellectual capital, constitute the problem of scientific research: definition, (instruments of) measurement and value. They are included in the scope of the sequential interrelation referred to, that is, they are configured together with this order, which means that, ultimately, what we want to know, the intellectual capital value, when it is not possible to be known, prevents the development of knowledge management.

Notwithstanding all the difficulties mentioned regarding to the intellectual capital, it is always possible to present a prosaic notion of what to understand by it. Thus, we can define it, even though it is a very simplified and, therefore, unsatisfactory definition, as everything that, because it is intangible, comes from the intellect (according to its name), which creates value, and in any case, it creates benefits, which translate monetarily, either directly and/or indirectly.

The contribution of the same paper, fits in knowing which authors are the ones who published works related to the same, which are their countries and, mainly, what they say is most relevant. Works of this type are not abundant, so a summary made up of 22 authors is shown to be important, not only to better organize scientific knowledge on the topic of the intellectual capital (which also contributes to having other facies) but, above all, to increase scientific knowledge related to it. Therefore, we will also have an answer to the research question. Among the sources where the papers were published, we highlight the *Journal of Intellectual Capital*, *Procedia Technology*, *Procedia - Social and Behavioral Sciences*, *Procedia Economics and Finance*, namely. The sources of obtaining were these same journals, selected according to the pertinence suggested by the respective titles, on the topic under consideration of the intellectual capital.

This paper is structured in 3 Sections: in Section 1, *Introduction*, a brief introduction is made to the topic of intangible assets, the problem related to them and the main problem inserted within this one and which is related to the intellectual capital. There is also a synthetic definition of this, which is the research problem underlying the paper as well as its contribution to the expansion of scientific knowledge in the context of this same topic. In Section 2, *Literature Review*, from a set of 22 selected authors, some features are presented that characterize what these authors mention in their respective papers, to which countries they belong and, above all, in a way, arranged that allow you to see in a structured way what is dispersed, improving your understanding in the eyes of those who read. In Section 3, *Conclusions*, the main conclusions and respective results are presented, which, in a more notorious way, were reached as well as, some limitations found, in addition to future avenues of future research that were raised in the main point which is the literature review. Finally, the references that served as the basis for preparing the paper are presented.

2. Literature Review

The 22 authors, fundamentally belong, from the point of view of nationality, to Romania, Spain, Malaysia, Latvia, United Kingdom, Turkey, Portugal, Germany, Australia and the United States, Indonesia, India, Lithuania and Hong Kong. Its analysis, succinctly, is carried out according to the chronological order of the papers, for each of the countries considered, since this is an approach that is considered to be more suitable to express the aforementioned arrangement of scientific knowledge. On the other hand, the selection also had the particularity of obeying authors who, in the content of the papers, had contents that were neither too extensive nor too complex,

regarding the methods, definitions and proposals presented. Other authors could be chosen, but it would raise the obstacle of contributing not to the clarity of knowledge but, rather, to its opposite.

2.1 Romania

Regarding to Romania, 4 authors stand out: Gadau (2012), Vosloban (2012), Sumedrea (2013), and Gogan and Draghici (2016).

With regard to Gadau (2012), if the notion of the intellectual capital is conceived as being connoted with that of *knowledge*, *information*, *intellectual property* and *experience*, the translation in the Financial Statements is not enough. This reflects the fact that accounting have scarce information. The intellectual capital, for this author, is a *new* notion, in the scope of the knowledge society, in which human resources are at the base of value creation. There are 3 guidelines, still for this author, in order to give expression (emphasis) to the intellectual capital: convergence of its key factors, in the context of intangible assets; its measurement; and accounting goals regarding the potential of the intellectual capital.

In conclusion, Gadau (2012) states that, it is imperative to build information systems that give material translation to human resources (who are closest to the notion of the intellectual capital) creating value, so that they recognize , present, measure and evaluate what the business financial reality consists of and, thus, the wealth that is created by them, be visible, and not hidden, given that the current information systems are insufficient and incomplete, especially regarding to accounting, to account for, the wealth created in the business community, in general, whatever the activity sector.

Vosloban (2012), on the other hand, associates the intellectual capital with the performance exhibited by workers (their qualifications) and their effects on business growth, within the scope of emerging markets. The higher (less) the higher (lower) the business growth will be. Thus, one of the keys, focuses on the management of this performance seen as a continuous process, which requires development, evaluation and reward to workers. It should be noted that the added value of this management is only possible in the long term. In an empirical part, 13 managers were interviewed, through a questionnaire, asking to know what, in their opinion, is the basis for explaining the performance of workers. As main lessons learned, they mentioned that it is achieved when goals, individual and collective, are reached. This translates into income, costs, profits, satisfied consumers, in service agreements provided, but also in the tasks that have been completed, in the qualifications possessed by the workers, without forgetting the attitudes and relationships between the workers themselves and innovation. together with decision-making. But it is personal motivation that constitutes the most important factor, associated with the work environment, clarity of the tasks to be performed, quality of communication and relations with customers. In the performance obstacles, 3 were mentioned: when the tasks are complex, the way and the form they are defined and the expectations set in relation to them and when there are no rewards. Finally, it should be noted that the managers also mentioned that, in order to describe and understand the markets, it is imperative to have qualifications for this purpose. The absence of this, very common, makes knowledge, growth and achievement of business performance difficult.

Sumedrea (2013), also take the same approach, as the previous author, to ascertain the relationship between the intellectual capital and performance, in this case, business but, in the context of markets marked by turbulence (crises), facing companies, new challenges, which reveal the taking advantage of opportunities and adapting businesses, *old* to *new*. In fact, the main idea is that when markets are characterized by crises, the development of companies, has its focus more on the components of the intellectual capital that are embodied in the human capital

and structural capital components, and profitability (performance) with the financial capital understood in the sense of *Intellectual Added Value Coefficient* (CVAI). The period under review was limited to the years 2010 to 2011, covering 62 companies. listed on the Bucharest Stock Exchange (Romania).

As main conclusions, this author points out that Romanian companies reacted profusely to the crisis of 2008-2011 by resorting to new businesses to replace the old ones. On the other hand, factors such as knowledge, skills and even experience are essential elements in this substitution, in times of crisis. Its expression is made using procedures such as the (re)thinking of others within companies, which it is corroborated by obtaining a negative value of the structural capital component. The relationship between the intellectual capital and performance, is confirmed in the sense of the first to the second and with a positive relationship: improving the first has positive effects in the second way, above all, learning in and of the crisis. This author even affirms that these are virtuous due to the positive reactions of companies to the same crises.

Gogan and Draghici (2016), are authors who make a contribution to define the intellectual capital. For this purpose, they are divided into 3 components: human capital, structural capital and customer capital. The first consists of the stock of knowledge that is associated with the qualifications and attitudes of workers, especially, in decision-making and dealing with the presentation of solutions to solve problems, without forgetting the establishment of interpersonal relationships. The second is what is associated with productivity, with the culture of companies and with their capacity to develop. It includes investments in systems, tools and other instruments that have the ability to have repercussions on knowledge in the business world. Thus, it includes equipment, networks, databases and software. Finally, the third one brings together the relationships that companies establish with the environment, such as customers and business partners.

In conclusion, the authors emphasize the need for the 3 components to be used to know the value of the intellectual capital, which facilitates adaptation and development processes, periodically, over time. The state it is in, in a company, is of all importance even for comparative purposes with similar and non-similar companies. This is facilitated by knowing the functions performed by the 3 components of the intellectual capital, which allows to know the impacts on business performance, and to improve the values assumed by each of the 3 constituent components. Knowledge management is also facilitated in this way, evaluating the performance of workers through the definition of defined and achieved goals.

2.2 Spain

Regarding Spain, we have Palacios and Galván (2007) and Delgado-Verde et al. (2016).

In Palacios and Galván (2007), the idea that the most recent research, with regard to the intellectual capital, focuses on 2 aspects: the measurement and management of intangible assets. In fact, 2 guidelines underlie the topic: how they were developed and how recommendations on them were or are evaluated.

Among the main conclusions that the authors draw, we highlight the absence of a single concept of the intellectual capital in corporate Financial Statements (when they exist). Even if there are concepts that prove to be similar. In the context of the growing importance that the intellectual capital increasingly assumes, at the same time, the authors emphasize that different models also appear in their sequence that present the same from different perspectives. This allows or at least facilitates comparisons and ways of measuring it.

With regard to Delgado-Verde et al. (2016), establish relations between the intellectual capital and radical innovation, considering manufacturing companies, with high technological intensity. They conclude that the relationship that may exist between the intellectual capital and radical innovation remains to be clarified. Using

the concept of quadratic effects of the intellectual capital and the radical innovations, they conclude that a unique pattern of accumulation of technology and vertical social capital has yet to be seen in radical type innovations. But it is known that, when technological companies are based on innovations of the radical type, they experience losses, after a certain point of accumulation of technological intensity. The relationships between radical innovations and human capital, the authors conclude, are positive in addition to linear.

2.3 Malaysia

Likewise, Malaysia also has 2 pairs of authors: Abdullah and Sofian (2012) and Hashim et al. (2015).

Regarding Abdullah and Sofian (2012), they mention that the notion of profiled intellectual capital, in addition to having the human capital, structural capital and relational capital components, also includes spiritual capital component. Their idea is to know which of these 4 components has the strongest association with business performance in companies listed on the Malaysian Stock Exchange.

They conclude, first, that companies, for lack of a management system, do not use the intellectual capital properly. The 4 components have a positive relationship with business performance, in particular, a stronger relationship between this and relational capital component. The nature and variation of the levels of the intellectual capital may influence the outcomes obtained.

In Hashim et al. (2015), like the previous authors, studied the effects of the intellectual capital on performance. They concluded that there is a relationship in which the human capital or structural capital components alone do not influence it. If companies have strong endowments of the 6 components of the intellectual capital, which are human capital, customer capital, structural capital, social capital and technological capital (as these authors define), they have more competitive advantages and better financial performance.

2.4 Latvia

In Latvia we only have 2 authors. Berzkalne and Zelgalve (2014). These dealt with the relationship between the intellectual capital and business value. The intellectual capital is defined using 3 components: human capital (associated with costs with the labor factor), structural capital (associated with added value) and capital employed (associated with financial capital - money invested in the company).

The study was carried out using the CVAI indicator. This is the sum of the efficiency of human capital (Human Capital Efficiency - HCE), the efficiency of structural capital (Structural Capital Efficiency - SCE) and the efficiency of capital employed (Capital Employed Efficiency - EEC). Thus, CVAI = HCE + SCE + CEE. Its absolute value is interpreted as the new value, in euros, that is created for each euro invested in a company. If greater (less than or equal) to 1, it means that, for each euro invested, a new value was created in the company higher (less than or equal) to 1, from the financial resources included in it. For instance, if VAIC = 4, a euro invested in one of the sample companies creates a value 4 times higher.

The sample considered comprises 64 companies listed on the respective Stock Exchanges, from 2005 to 2011, from the 3 Baltic countries: Latvia, Estonia and Lithuania.

They concluded that, the highest value of the VAIC was observed in Estonia, in 2006, having risen to 4.84 euros and the lowest to 1.67 euros, in Lithuania, in 2007. Except 2006, in the 3 countries, CVAI values are always greater than 1.

2.5 United Kingdom

In this country there is also an author: Goebel (2015). In fact, Goebel (2015), studied a methodology of the

intellectual capital, in order to know which are the determinants of it. To estimate the value, 3 indicators were used: Market-To-Book, Ratio Q by Tobin and the Long-Run Value-To-Book (LRVTB). And to adopt as an indicator of the of the intellectual capital value, the author adopted ROE and ROA (business performance). He concluded that, there are 4 more salient traits to underline: in all indicators for measuring the value of the intellectual capital, values greater than 1 were obtained in all activity sectors, but in the Market-To-Book indicator, the higher value and greater standard deviation, which reveals more volatility and discrepancies between market and accounting value. This is due to insufficient accounting information and fluctuations in quotations. In Tobin's Ratio Q and LRVTB indicator (antilogarithm), the values are lower than the Market-To-Book, with the values being equal to the average and standard deviation, in which the standard deviation is the lowest. If the value of the intellectual capital increases as measured by ROE and ROA, the ranking of performance will also increase. Of the 3 indicators for estimating the value of the intellectual capital, LRVTB has greater explanatory power in explaining business performance. It is the best estimator of it.

2.6 Turkey

With regard to Turkey, we have 3 authors: Kalkan et al. (2014), Yildiz et al. (2014) and Örnek and Ayas (2015).

Regarding to Kalkan et al. (2014), these relate, the intellectual capital, innovation and organizational strategy, seeking to know what repercussions they have on business performance. As conclusions, we highlight the fact that both 3 have positive effects on business performance. If Pearson’s sample correlation coefficient is used, the effects are +0.222, +0.221 and +0.101, respectively, to 1% significance level. If measured by the regression coefficients of a multiple linear regression, they are +0.226, +0.192 and +0.465, also, respectively, but to 5% significance level.

Yildiz et al. (2014), present a paper in the context of measuring the intellectual capital in the banking sector, from 2007 to 2011 in Turkey, belonging to the private, public and participating sectors. They conclude that, without discriminating by type of bank, the components, according to their importance, are client capital, structural capital and human capital. By type of banks, those of the private type, appear first, then in participation and, finally, the public. In human capital component, the most important indicator was training and development. In structural capital component, technological processes and those related to management, and in the capital of customers component, which is related to distribution channels.

Örnek and Ayas (2015), for their part, studied which are the relations that can be observed between the intellectual capital and innovative behaviors, of the work factor, both on the business performance (of the businesses), They concluded by the existence of a relationship between the intellectual capital and business performance. However, this fact is dependent on the intellectual capital being incorporated into innovation and, if well managed, increasing business performance. They concluded, however, information is increasingly important in conjunction with the intellectual capital. Being incorporated via innovative ideas increases performance, so innovative behaviors, derived from the work factor, are crucial in this area. Its correct management creates sustainable competitive advantages. On the other hand, innovation must go hand in hand with knowledge sharing.

2.7 Portugal

Portugal has 2 authors, 1 of which is common in both papers: Gouveia and Couto (2017) and Gouveia and Pinto (2017).

As far as Gouveia and Couto (2017) are concerned, they take a slightly different approach from previous

authors. Indeed, they present capital as a generic designation, unfolding into the intellectual capital, human capital, social capital and territorial capital. With regard specifically to the intellectual capital, they say that its definition is *complex and varied* (p. 31), and that it has as a common element that of creating competitive advantages in companies or organizations. On the other hand, it is associated with the idea of knowledge, skills and technologies that are at the basis of its creation, with effects on the companies' performances. Information and communication technologies play a central role in this area. The evaluation of the value that knowledge has, is closely linked to people, demanding that they have skills, and that they are all the more necessary the more the amount of information is greater and the greater the complexity of articulating and using it. In conclusion, human capital, one of the designations used by the authors associated with the intellectual capital, reinforces the importance of *hard skills*[1].

Regarding Gouveia and Pinto (2017), they refer to the way in which knowledge and human capital can be accounted for. In the current state of knowledge, although insufficient, the NCRF of the SNC, accept with some acceptance in the light of NCRF N.º 7 - Tangible Fixed Assets, without considering themselves as elements of the Asset, because they do not fulfill the element of tangibility. In NCRF N.º 6 - Intangible Fixed Assets, an intangible asset is defined as the resource, dominated by an entity, resulting from past events and which is expected to generate intangible future income. These 2 types of capital fall on assets, if they generate these, and their cost can be measured reliably. As this is not guaranteed, there is difficulty in accounting by companies.

2.8 Germany

This country has a couple of authors: Kaufmann and Schneider (1994).

Kaufmann and Schneider (1994), published a paper that departs from any of the authors already cited with regard to its content. In fact, the goal is to summarize the research that, at the time, had already been carried out: 1994. The justification is based on the fact that, at the time, the business environment is competitive (already then), resources are limited and also if observe that knowledge was already more and more important, even being seen as a *commodity*, even an element of competitiveness, which serves to create value and innovation. These authors states that, the theoretical-practical references, are of all importance so that it is possible to manage and explain and accumulate intangible assets. For such research, in 1994 it was, and still will be in a certain way, to do so that one can know something about the explanations of the functions that can be attributed to intangible assets, essential to understand related issues such as those of competitiveness. and the creation of competitive advantages. The categorization of intangible assets is also important, in order to know the possibilities of application to business, and what specific types exist to be described and characterized. When are they intangible and when are they not? In which sectors are they most abundant, and in what ways can the value of the intellectual capital be estimated, in particular, in order to highlight how important they are to the economies of countries? The possibility of cooperating with research centers and their respective researchers so that through projects it is possible to learn how different opinions were developed and where the roots are rooted, to answer questions regarding the intellectual capital that arise within the scientific community, are some directions to answer to these questions and doubts.

2.9 Australia and United States

In these two countries we have two authors: Becker (1993) and Arvan et al. (2016).

[1] Specific qualifications to individuals and which are not innate. They are specific to some people and are not acquired through teaching.

In Becker (1993), his most important work, dating from 1964, is entitled *Human Capital - A Theoretical and Empirical Analysis with Special Reference to Education*. Thus, what came to be called the intellectual capital with John Kenneth Galbraith, in 1969, 5 years earlier was called human capital, in the sense of intellectual capital. Overall, his work is divided into 3 parts. In *Part I — Theoretical Analysis*, Becker (1993) focuses on investment in human capital and its effects both on the income earned by people and on the relationship established with the rates of return of this same human capital. In *Part II — Empirical Analysis*, this same author analyzes the same rates of return, related to those who attend education compared to those who do not, which includes what the author calls underinvestment in education, beyond to performing a trend analysis of the rates of return in Higher Education over time and what they mean, which includes the age factor, income, wealth and the relationships they establish with human capital. Finally, in *Part III — Changes in the Extended Economy*, the author deals with the rise and fall of human capital (in the sense of the evolution of the age of those who own it), the division of labor, the costs of coordination, without forgetting knowledge as well as questions that arise with the relationships established between people's ages and economic growth.

Some ideas, more specifically, can be highlighted in the work of Becker (1993). Among them, it can be highlighted that there is a relationship between the knowledge obtained in Higher Education and empirical knowledge, derived from practical experience (activities carried out in the labor market) and this relationship is in the sense that the first it has consequences on the following (and vice versa) but with more emphasis on the relationship that involves the first. In more specific terms, the relationships are more reflected in the fact that, in the labor market, the individual disposable income, present and, above all, future, is higher and grows as a worker accumulates knowledge and experience, combined, in the activities that it exercises.

On the other hand, it is also worth mentioning that this author relates human capital to the family. In fact, he stresses that the latter influences the knowledge, skills and values defended by children, and the differences that are observed between them have their origin in the differences in the level of education of the families to which the children belong. Some families encourage the existing differences, which are accentuated in time (for a larger or smaller gap) and which appears to be associated with the age of the children. When families have a higher level of education, their respective children exhibit higher school progression. Families' decisions to spend income on education in Higher Education, in particular, are made based on the number of children and spending *per capita*.

Arvan et al. (2016), present a model that aims to measure and make a contribution to planning the intellectual capital. From the outset, it considers the intellectual capital to be composed of the human capital, structural capital and relational capital components and, on the other hand, it uses a methodological procedure, called *fuzzy* (called *Fuzzy Cognitive Maps - FCM´s*). The authors conclude that the improvement of the criteria for measuring the intellectual capital, according to the criterion of maximum influence over the rest, does not guarantee the achievement of the intellectual capital development. Thus, the proposed model proves to be insufficient in its claims, which requires that the intellectual capital planning processes require other developments in other directions of research and scientific development.

2.10 Indonesia

Indonesia also has only one author: Nuryaman (2015).

Nuryaman (2015), studied the impact of the intellectual capital on business performance in 93 companies, in 2012, listed on the Indonesian Stock Exchange. The intellectual capital is measured by CVAI (similar to Berzkalne and Zelgalve (2014) in Latvia). It should be remembered that this indicator is equal to the sum of the value added

by the capital employed, the value added by the human capital component and the value added by the structural capital component. As more salient conclusions, he mentions that the added value by the first and the third, revealed to have great influence on the business value. On the other hand, he also concluded that investors place more importance on human capital component, which is probably due to the fact that they understand that structural capital component results from human capital component. For this same author, good intellectual capital can make companies more profitable (measured by ROE), verified by the existence of a positive relationship. He also found that the greater the intellectual capital, the greater the financial performance of companies. It should also be noted that, ROE, denoted to have functioned as a variable that interferes between the intellectual capital and business value. And the greater the intellectual capital, the greater the improvement in financial performance according to ROE, which can assume high values. As a more notorious implication, the author mentions that, on the Stock Exchange, the quotations of the companies (analyzed) increase.

2.11 India

This country, like the previous one, has only one author: Sekhar et al. (2015).

Sekhar et al. (2015), with regard to small and medium-sized companies, in India, address the measurement of the intellectual capital using a methodology called *Multi Criteria Decision Making* (MCDM) called the *Analytic Hierarchy Process* (AHP), considering a set of indicators defined. Regarding to business performance, the outcomes obtained by the authors revealed that small and medium-sized companies need to increase efforts to be more competitive and more innovative. The methodology used has the ability to allow companies to be compared with each other, making it possible to know the value of their intellectual capital.

2.12 Lithuania

Lithuania also has only one author: Uziene (2015b).

Indeed, Uziene (2015b), links the intellectual capital with (open) innovation and knowledge (seen as flows and not stocks), seeking to know the relationships that may exist between these 3 strands. (Open) innovation is the knowledge and flows that enter and leave a company, circulating within it. What influence does this type of innovation have on the intellectual capital from the point of view of business management?

Among the main conclusions that this author drew, it should be noted that (open) innovation is a factor that enables new challenges for companies, with regard to the management of the intellectual capital. However, the current knowledge that one has of this, proves to be insufficient, so new developments are necessary to answer questions posed by (open) innovation. Small and medium-sized companies are the ones that most lack this knowledge. The relational capital component proves to be the most important in this relationship. (Open) innovation, while contributing to improve the intellectual capital, because it creates competitive advantages, also makes contexts more complex, which means that, instead of improving, their creation makes them more difficult. This is also due, in part, to the lack of knowledge that needs to be developed to supply this handicap. Knowledge management has a very important role here, because it has to answer to this handicap. In turn, the lack of knowledge has the potential to stimulate more ... (open) innovation!

2.13 Hong Kong

Finally, we have Zhicheng et al. (2016), also a single author.

Zhicheng et al. (2016), also make a contribution related to the knowledge of what the impacts of the intellectual capital on business performance are, but incident on 2 types of companies: MAKE (*Most Admired*

Knowledge Enterprise) and NONMAKE (the opposite), respectively, award-winning and non-award-winning knowledge management. The former promote their brands and the performance of their businesses. The idea is to find out if the former, in fact, have and develop better performances than the latter. The authors found that MAKE exhibited a positive Pearson linear sample correlation with the efficiency of human capital and with ROA, ROE and productivity, in agreement with other authors. The CVAI and its components, exhibited greater explanatory power of business performance (measured by the upper R^2) than in aggregate. The efficiency of human capital, proved to be the strongest explanatory variable. MAKE companies have demonstrated efficiency in managing the intellectual capital, because they have created more value. But it is on the efficiency of human capital that MAKE companies should focus. MAKE companies, the authors suggest, should improve the efficiency of human capital. However, by themselves, they do not guarantee better business performance.

3. Conclusions

Regarding the research question, the literature review based on a collection of 22 selected authors, it gives several answers, none adequate to know the value of the intellectual capital as it is known of any other tangible asset. It is also observed that the contexts are different and, therefore, the approaches necessarily have to lead to different answers (2 or more than 2). In a word: either it has many divergent answers or ... it has none in the sense that it can be used to apply in reality.

One of the main conclusions that can be referred to as the emphasis on the intellectual capital, lies in the fact that there is still no definition of what to understand by the intellectual capital. Consequently, there will also be no way to measure it and calculate its value, in particular. It is an interrelated and sequential triad. On the other hand, the specialized literature, instead of giving a contribution to clarify this main problem, accentuates it, even more, by presenting a plethora of concepts about what is the intellectual capital. Fundamentally, it contributes in that sometimes it has the same number of components, other times it does not and, when it does, there is no correspondence between their semantic sense. This, instead of facilitating and going in the right direction, goes in the opposite direction, contributing to a dispersion about the concept and the ways of measuring it and calculating its value. On the other hand, there are contributions that further complicate the panorama, insofar as they relate to aspects such as performance, innovation, among others, reducing their thorough scientific clarification.

Thus, one of the limitations of this paper is that of whatever literature is selected on the intellectual capital, it often varies from authors to authors, which does not allow to clarify what has been written about it, much less to apply in practical reality. Thus, the selection made was one of the possible ones, being perfectly plausible to select another one that is also valid.

As future avenues for scientific development, there are always the ones that come up with definitions on what to understand by the intellectual capital, such as be accompanied by a way of measuring and applying to a (only) practical case, which has the referred triad, having an objective value of arrival, on what is the value of the intellectual capital, which is intended to be ultimately known.

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