24th RSEP International Conference on Economics, Finance & Business – Virtual/Online
24-25 February 2022, Holiday Inn Vienna City, Vienna, Austria

www.rsepconferences.com **CONFERENCE PROCEEDINGS/FULL PAPERS** **ISBN: 978-605-70583-6-2/March 2022**

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The impact of the intellectual capital of the business performance: Case study applied on European Union

Alexandra Ioana Daniela Rus[a], Monica Violeta Achim[b], Narcisa Corina Bodescu[c]

[a] *PhD candidate, Babes-Bolyai University, Faculty of Economics and Business Administration, Cluj-Napoca, Romania*
E-mail: alexandra.rus@econ.ubbcluj.ro
[b]*Professor PhD, Dr. Habil Babeş-Bolyai University, Department of Finance, Faculty of Economics and Business Administration, Cluj-Napoca, Romania*
[c] *PhD candidate, Babeş-Bolyai University, Faculty of Economics and Business Administration, Cluj-Napoca, Romania*

DOI: https://doi.org/10.19275/RSEPCONFERENCES162

Abstract

The study of intellectual property has become an important topic in recent years. Since its emergence, it has developed into a system designed to protect the results of human creation. There are a wide applicability of intellectual capital on the private sector. The assessment of intellectual capital can be performed for several situations such as to assess the value of the company, for the necessity of registering in the country or in other states, for the sale or purchase of the company or some components of the intellectual capital etc. The aim of this paper is to investigate if there is a possible influence of intellectual capital on company's performance. For this purpose we use a panel data set of 2742 of companies located in countries from European Union which active in the approximatively all industries. The financial data were extracted from the Compustat IQ Global database for the period of 2010 to 2019. Following the application of the Least Square Method our results confirm the existence of a positive relationship between intellectual capital and the financial performance of the analyzed countries. The higher and the more visible impact was found on the companies which belong to pharmaceutical, software, IT and healthcare sectors. In order to reinforce our hypothesis we present an alternative study applied on the pharmaceutical sector in Romania. Also our results of have implications for policymakers and regulators in countries that want to improve the human resources.

Keywords: intellectual capital, financial performance, company' performance

Jel Codes: J24, L25, M21

1. Introduction

Intellectual capital is the intangible asset that can transform knowledge into wealth-creating goods. Its internal driving force is often regarded as a contributing factor to a firm's financial performance (Jian Xu & Yi Zhang, 2021). It is a strategic resource that can help an organization gain competitive advantages in the market. Intellectual Capital is becoming more prevalent in the accounting and finance industry. Its importance has been recognized as a critical resource to enhance firm performance and maintain competitive advantages.

Due to the existence of intelligence, the world wouldn't have been possible without humans. This is the reason why intellectual capital is very important to be studied.

Since the topic has been researched a lot in the last decades, its exact meaning has been refined. For most companies, having the proper intellectual capital is very important. Also intellectual capital is a vital component of a company's strategy to create value. That's why, intellectual capital could be the value creation process that can be achieved through the use of intangible resources (Alipour et al., 2017). It can bring a competitive advantage to a company and improve its performance. That's why it become a crucial factor in the knowledge-based economy as more firms realize that their core competencies are invisible assets (Ekaningrum, 2021). Companies must transform their strategy from a workforce-based business to a knowledge-based one. Knowledge is an integral component of business (Muslih et al., 2021). For companies, the key to their success is their intangible assets. A manager's role is one of the most important facets of his or her work.

There is also evidence supporting the existence of creative destruction and creative accumulation. This suggests that the concept of Schumpeterian assumptions is also warranted (Friz and Günther, 2021).

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Developing intangible assets such as intellectual capital is a prime duty of a manager. However, this task can be very challenging when the most valuable assets are not physical objects but are intangible (Gohar, 2019).

This study aims to investigate if there is a relationship between companies' intellectual capital and their performance.

For this purpose we use a panel data set of 2742 of companies located in countries from European Union which active in different sectors such as: Biotechnology, Chemicals, Electric Utilities, Health Care Equipment, Health Care Equipment & Supplies, Health Care Providers & Services, Health Care Technology, IT Services, Machinery, Pharmaceuticals, Software, Utilities and Wireless Telecommunication Services. The financial data were extracted from the Compustat IQ Global database for the period of 2010 to 2019. One main original value of this work brought to the literature is the fact that we have conducted the study on several industries on the entire Union European, not just on one field. The method that we have used is Panel Least Square Method and here were constructed regressions in order to see if there is a relationship between intellectual capital and company's performance. The results from our panel analysis reveals a positive influence of the intellectual capital on company's performance. Our robustness checks come to reinforce these results.

The remainder of the paper is organized as follows: section 2 presents a brief literature review to support our working hypotheses, section 3 describes the methodology, in the section 4 we have the results and a discussion of our analysis and the section 5 reflects our conclusions.

2. Literature review

In what concern the literature review we have to mention from the beginning that the concept 'intellectual capital' was launched for the first time in 1969 by J.K. Galbraith who said that 'the intellectual capital means all intellectual activity' (Bontis, 1996).

The relationship between intellectual capital and company's performance determined the managers to see and to try to discover new ways in order to describe and to measure the intellectual capital (Burlea, 2003).

The impact of intellectual capital can be seen in a lot of studies conducted in different countries. After we have made a short literature review, we found that there is a relationship between intellectual capital and company's performance and also how it can influence.

The effect of intellectual capital on the company's value was determined in 2015 through Pulic's Methods. The return was a latent variable that can be used to explain the relationship between the company's value and intellectual capital (Nuryaman, 2015).

The importance of intellectual capital was presented by Asiaei and Jusoh in 2017, who found that companies with higher levels of intellectual capital emphasize a greater diversity of performance measure and also the that the diversity of measurement mediates the relationship between intellectual capital and the organizational performance (Asiaei & Jusoh, 2017). Also an interesting aspect was found by Boujelebene &Affes in 2013 consisting in the existence of a negative association between the disclosure of intellectual capital and cost of equity, but the hypothesis has not been validated (Boujelebene & Affes, 2013). In what concern the behavior of intellectual capital, it was also studied in bad times by Sumedrea in the same year, 2013, who found through VAIC model that in crisis time the development of companies is influenced by two components of intellectual capital namely, human capital and structural capital (Sumedrea, 2013).

Intellectual capital is also very important for economy if we talk about an important component like knowledge. For example, Jian Xu and Yi Zhang highlighted in a study that 'intellectual capital' became a very important resource in the knowledge economy. They have made a study in order to understand the relationship between intellectual capital and financial performance for the listed Chinese agricultural companies. Their results shown a positive relationship between intellectual capital and financial performance(Jian Xu and Yi Zhang, 2021).

In what concern the market value, also here the intellectual capital made his presence. An interesting study was made by Mačerinskienė & Survilaitė (2019) where they tried to examine the impact of intellectual capital on the market value. In this way they have used data from 58 Baltic states' companies listed in Nasdaq Baltic stock exchange and their study was based on the four components of intellectual capital such as: human capital, structural capital, juridical capital and relational capital. From this study the authors conclude that intellectual capital has a positive impact on the market value of the companies from Baltic States (Mačerinskienė & Survilaitė, 2019).

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Another category of studies are focused on the pharmaceutical sector as an important sector based on knowledge. In 2018, Rus et al., also studied the impact of intellectual capital using a sample of pharmaceutical companies which are listed at Bucharest Stock Exchange over the period 2013-2018. Their findings revealed a positive influence of intellectual capital on company's performance (Rus et al., 2018). Another authors, like Anghel et al., in 2018 analyzed the interdependency between intellectual capital and financial performance of biotechnological companies in the pharmaceutical sector. Their study was made for 24 biotech companies for 2002-2014 period. Their results revealed a significant negative relationship between Return on Assets, Return on Equity and Market to Book ratios and in this way they have used another indicator efficiency such as Research and Development Expenditures (R&D) in order to measure the intellectual capital. After introducing R&D the sense of the regressions was strongly changed, they receiving a strongly positive relationship between intellectual capital and company's performance (Anghel et al., 2018). Another sector where intellectual capital has been researched is manufacturing sector. Such study was made in 2020 by Xu and Li, where they examined the impact of intellectual capital and three of its components as human capital, structural capital and relational capital on company's performance for companies listed in China. They have used 953 manufacturing companies listed on the Shanghai and Shenzhen Stock Exchanges over the period 2012-2016.

They found that Physical capital has the biggest impact but also they found that stated-owned enterprises have a greater impact of intellectual capital than the private-owned companies and also they have found that high-tech manufacturing companies have higher impact in what concern the intellectual capital and the firm performance (Xu & Li, 2020).

Based on the aforementioned literature, the following working hypothesis is stated.

Hypothesis. *There is relationship between intellectual capital and company's performance.*

3. Data and methodology

Variables

In what concern the applicability of intellectual capital and its impact on company's performance our study conducts a sample of companies located in European Union Countries time span 2010-2019.

Dependent variables: Financial performance of the companies

The company's performance can be quantified through a multitude of indicators. One of the main category refers to accounting performance or accounting based measures of financial performance (Rus et al., 2018). They reflect an organization's internal efficiency manifested through a lot of indicators like profitability, efficiency, liquidity, growth, such as: return on sales, return on assets, return on equity, assets on turnover, leverage ratio, equity to fixed assets ratio, working capital, flexibility ratio, growth ratio, cash flow return on assets (Damodaran, 2001, Mironiuc, 2009, Achim and Borlea, 2014, 2019, Anghel et al. 2018)

The aforementioned literature highlights that a good way to measure the performance consist in the Return on Equity (ROE) and Return on Assets (ROA), so that's why we choose ROE and ROA as being dependent variables.

Independent variable: Intellectual capital

There are two main categories of methods for measuring the intellectual capital of companies. The first one is based on return on assets, and the second one is a direct method (Rus *et al*., 2019). In what concern the first category of methods, there are two most important direct methods of measuring the intellectual capital: Citation - Weighted EVA Patents Method and Technology Broker Method. Gordon Petras has proposed a method that takes a look at the role of knowledge in business, and then all the values of the assets that are related to knowledge. This method links the company's strategies to the development of knowledge assets. The other direct method is the Technology Broker Method, which measures the intangible capital's value in monetary terms (Todericiu and Stanit, 2017). The second type of method, which is based on return on assets, shows that a company is performing well by comparing its profit to the amount it has invested in assets (Rus *et al*., 2019).

According to authors (Achim and Borlea, 2019, Mironiuc, 2009), for the reasons of measuring the intangible capital of a company, we use *economic value added* (*EVA*).

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Control variables

Following previous studies, as Kuncova et al. (2016), there are some control determinants that are used in the literature, such as total assets or the turnover.

The relationship between intellectual capital and company's performance is estimated through the following regression:

$$\textit{Financial performance}_{i,t} = \beta_0 + \beta_1 \textit{ Intellectual capital}_{i,t} + \beta_2 \textit{ Controls}_{i,t,} + c + \varepsilon_{I,t}$$

Where intellectual capital is expressed as economic value added (EVA) of the company i in year t; financial performance is expressed as return on equity (ROE) and return on assets (ROA); control variables are represented by total assets and turnover; β_0 , β_1 , β_2 are the regression coefficents and ε represents the error term.

The description of the variables is presented in *Table 1*.

Table 1. Description of the variables

Variable	Way of expressing	Unit	Source
Dependent variables			
Return on Equity (ROE) Return on Assets (ROA)	*ROE* is the measure of a company's net income divided by its shareholders' equity		
	ROA is computed by dividing its net income by its total assets	% (percentage)	Own calculations
Independent variables			
Logarithm of Economic Value Added(LEVA)	*EVA* is computed by the difference from Net Operating Profit After Tax and the product between Invest Capital and Weighted average cost of capital (logarithm)	$ (USD)	Own calculations
Control variables			
Logarithm of Turnover (LOGTURNOVER) Logarithm of total Assets (LOGTA)	*LOGTURNOVER* the logarithm of a company's turnover *LOGTA* the logarithm of a company's total assets	$ (USD)	Compustat https://www.wharton.upenn.edu

Source: author's processing

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Data and summary statistics

The study uses panel data set of 2742 of companies located in countries from European Union which active in the approximatively all industries. Their data were obtain from the Compustat IQ Global database and the study was made for the period of 2010 to 2019. The information obtained was refined, specifically, we have eliminated the companies with no dates available for the entire analyzed period. Ultimately, we obtained an unbalanced panel of 27.104 observations. First we have made the empirical study for the all industries and this category was named *Group 1,* except some of them like: Biotechnology, Chemicals, Electric Utilities, Health Care Equipment, Health Care Equipment & Supplies, Health Care Providers & Services, Health Care Technology, IT Services, Machinery, Pharmaceuticals, Software, Utilities and Wireless Telecommunication Services. And the category composed with the industries listed above was named *Group 2*. We choose these industries based on what we have research on the literature review.

Table 2 present the descriptive statistics for Return on Equity (ROE), Economic Value Added and the control variables. Here, we have split the entire database into two sections, it means that in the first part of the table we will present all the industries except the above mentioned and the second section will be composed by industries that were excepted in the first case.

In what concern our dependent variable the central trends indicators show us the following: the mean is 0.1921 and the median is 0.1521 for group 1 and for group 2 they have the following values: mean 0.2040 and the median is 0.1623. So, we can see that the mean and also the median is higher for the group 2. The standard deviation is approximatively 0.8 for both of them.

Table 2. Summary statistics

Group 1					
	Mean	**Standard deviation**	**Median**	**Jarque- Bera**	**Probability**
ROE	0.1921	0.8794	0.1521	897956	0.0000
LEVA	1.0396	1.0902	1.0081	23.0110	0.0000
SIZE (LOG TA)	2.6129	1.0350	2.5222	43.5606	0.0000
LOGTURNOVER	2.5050	0.9495	2.3351	430.9560	0.0000
Group 2					
	Mean	**Standard deviation**	**Median**	**Jarque- Bera**	**Probability**
ROE	0.2040	0.8437	0.1623	2.20E	0.0000
LEVA	0.9887	1.1221	0.9493	16.97854	0.0000
SIZE (LOG TA)	2.6117	0.9511	2.6366	55.67099	0.0000
LOGTURNOVER	2.5185	1.0429	2.4270	37.16882	0.0000

Source: author's processing

4. Results and discussions

Group 1

The results of the panel regression run using the method Panel EGLS are presented in the *Table 3* and *Table 4*. First, based on our results after running the Redundant Fixed Effects-Likelihood Ration tests and running the Hausman Test we selected between fixed an random effects the suitable effects for our model.

We fixed the following hypotheses to see if the random or fixed effects fit our model:

H0: coefficients = 0 and H1 : coefficients ≠ 0. For a probability level of 10 %, the null hypothesis will be accepted, choosing the fixed effects according to the Redundant Fixed Effects-Likelihood Ratio in order to test the model

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with dependent variable ROA and according to Hausman Test, the random effects are suitable for dependent variable ROE.

In order to estimate the dependent variable chosen as being ROE and ROA, the data were tested with EGLS method (*Table 3* and *Table 4*).

Table 3. Return On Equity$_1$ depends on intellectual capital expressed by LEVA and other control variables

Variable	*Coefficient*	*Standard Error*	*Probability*
LEVA	0.1559	0.0211	0.0000
LOGTURNOVER	-0.2385	0.0557	0.9599
LOGTA	-0.2158	4.7480	0.0000
C	1.2012	12.0593	0.9207
R-squared	36.23%		

Note: Significant for any level of acceptance (1 %, 3%, 5%, 10%)

Source*:* author's processing

Based on *Table 3*, all the probabilities are equal to 0 except Turnover, so they all are significant for any level of acceptance and this variable will be taken out from our model. The constant also will be taken out. From the point of view of the model goodness-of-fit, the R-squared is equal to 0,3623 and indicated that the dependent variable ROE depends in proportion of 36,23 % from the independent variables studied. In this way, the states researched hypothesis is accepted, meaning that Intellectual Capital measured through LEVA has an impact on the company's performance (ROA).

Table 4. Return On Assets$_1$ depends on intellectual capital expressed by LEVA and other control variables

Variable	*Coefficient*	*Standard Error*	*Probability*
LEVA	0.2037	0.0190	0.0000
LOGTURNOVER	-3.0233	4.2697	0. 4789
LOGTA	-0.5203	0.0497	0.0000
C	8.9240	10.8465	0. 4107
R-squared	22.82%		

Note: Significant for any level of acceptance (1 %, 3%, 5%, 10%)

Source*:* author's processing

Based on *Table 4*, all the probabilities are equal to 0 except Turnover, so they all are significant for any level of acceptance and this variable will be taken out from our model. The constant also will be taken out. From the point of view of the model goodness-of-fit, the *R-squared* is equal to 0,2282 and indicated that the dependent variable ROE depends in proportion of 22,82 % from the independent variables studied. In this way, the states researched hypothesis is accepted, meaning that *Intellectual Capital* measured through LEVA has an impact on the company's performance (ROA).

Group 2

In order to estimate the dependent variable chosen as being ROE and ROA, the data were tested with *EGLS* method *(Table 5 and Table 6).*

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Table 5. Return On Equity$_2$ depends on intellectual capital expressed by LEVA and other control variables

Variable	*Coefficient*	*Standard Error*	*Probability*
LEVA	0.2202	0.040	0.0000
LOGTURNOVER	-2.3599	8.118	0. 4333
LOGEVA	-0.5616	0.109	0.0000
C	7.5644	21.240	0. 000
R-squared	32.26%		

Note: Significant for any level of acceptance (1 %, 3%, 5%, 10%)

Source*:* author's processing

Based on *Table 5*, all the probabilities are equal to 0 except Turnover, so they all are significant for any level of acceptance and this variable will be taken out from our model. From the point of view of the model goodness-of-fit, the *R-squared* is equal to 0.3526, and indicated that the dependent variable ROE depends in proportion of 35,26 % from the independent variables studied. In this way, the states researched hypothesis is accepted, meaning that *Intellectual Capital* measured through LEVA has an positive impact on the company's performance (ROE).

Table 6. Return On Assets$_2$ depends on intellectual capital expressed by LEVA and other control variables

Variable	*Coefficient*	*Standard Error*	*Probability*
LEVA	0.1616	0.0124	0.0000
LOGTURNOVER	-0.121	0.0077	0.2563
LOGEVA	-0.1680	0.0134	0.0000
C	0.4030	0.0314	0.0000
R-squared	27%		

Note: Significant for any level of acceptance (1 %, 3%, 5%, 10%)

Source*:* author's processing

Based on *Table 6*, all the probabilities are equal to 0 except Turnover, so they all are significant for any level of acceptance and this variable will be taken out from our model. From the point of view of the model goodness-of-fit, the *R-squared* is equal to 0.2700, and indicated that the dependent variable ROE depends in proportion of 27 % from the independent variables studied. In this way, the states researched hypothesis is accepted, meaning that Intellectual Capital measured through LEVA has an positive impact on the company's performance (ROA).

Summarising the study, we may observe that for both groups, the research hypothesis offer us a positive answer, there is a relationship between intellectual capital and company's performance. More than that, intellectual capital has a positive impact on the performance of the companies. But, as we showed above a higher impact is present on the industries like: Biotechnology, Chemicals, Electric Utilities, Health Care Equipment, Health Care Equipment & Supplies, Health Care Providers & Services, Health Care Technology, IT Services, Machinery, Pharmaceuticals, Software, Utilities and Wireless Telecommunication Services.

The results of our paper, regarding the regressions constructed, revealed that there exist an impact of intellectual capital on company's performance. Even if the financial performance is measured through Return on Equity or Return on Assets the intellectual capital measured through Economic Value Added influence the performance existing in a company.

In what concern the results of our study we found similar results in similar industries, for example Anghel et al., in 2018 in a study made on Biotech companies found that intellectual capital has an impact on company's performance, and also Rus et al., in same year have found the impact of intellectual capital on company's performance from Pharmaceutical sector.

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5. Conclusions

Regarding the major topic of our study, intellectual capital, we can start by saying that it is an important pion in an organization. It is considered as being the key for expanding the intelligence and also an important factor for increase the performance. We can affirm this thing due to the fact that it is composed by all of knowledge, experience, values and also skills that an employee should have in a company.

In our study the attention was focused on microeconomic level. So, we choose to measure Intellectual Capital through Economic Value Added and the performance was measured through Return on Equity (ROE) and Return on Assets (ROA). We choose Economic Value Added in order to measure intellectual capital due to the fact that it allows us to do so in a quantitative manner and it also increases the chances of seeing an increase in performance.

In this way, our results were given by some equations that have been generated by selecting 2742 companies from European Countries from all industries and then the data were split into a second group summarizing the industries as: Biotechnology, Chemicals, Electric Utilities, Health Care Equipment, Health Care Equipment & Supplies, Health Care Providers & Services, Health Care Technology, IT Services, Machinery, Pharmaceuticals, Software, Utilities and Wireless Telecommunication Services. Following the application of the Least Square Method, the significant coefficients of all the estimated model confirm the existence of a positive relationship between intellectual capital and the financial performance for the companies that were analyzed. The higher and the more visible impact exist on the industries where are: pharmaceutical, software, IT and healthcare sectors.

The limitations of the paper could consist in presenting only one method of measure for Intellectual Capital, Economic Value Added. In our future studies we have in view to use Market Value Added in order to measure Intellectual Capital in what concern the methods based on assets. Another objective is to extend the research for methods like Citation - Weighted EVA Patents Method and Technology Broker Method and Technology Broker Method.

Acknowledgement: This work was supported by a grant of the Romanian Ministry of Education and Research, CNCS - UEFISCDI, project number PN-III-P4-ID-PCE-2020-2174, within PNCDI III.

Declaration of Competing Interest

The authors of this paper certify that there is no financial or personal interest that could have appeared to influence the work reported in this paper.

References

Achim, M. V. and Borlea S.N. (2019). *Ghid de analiză-diagnostic al stării financiare*. Cluj- Napoca: Risoprint.

Achim, M. V. and Borlea S.N. (2014). Environmental performances – Way to boost up financial performances of companies. *Environmental Engineering and Management Journal*

Anghel I., Siminică M., Cristea M., Sichigea M., Noja G.G. (2018). Intellectual capital and financial performance of Biotech companies in the pharmaceutical industry, *Amfiteatru Economic*, 20-49, pp.631-6462018

Asiaei K., and Jusoh R. (2017). Using a robust performance measurement system to illuminate intellectual capital. *International Journal of Accounting Information System*, Volume 26

Bontis, N. (1996). There's a price on your head: managing intellectual capital strategically. *Ivey Business Journal – Business Quarterly*, Summer, pp. 40-7

Boujelebene M.A. and Affes H. (2013). *The impact of intellectual capital disclosure on cost of equity capital: A case of French firms*, Journal of Economics Finance and Administrative Science

Burlea, A. Ș. (2003). Impactul capitalului intelectual asupra performanței organizației. *Revista Informatica Economică I(25).Intellectual Capital* , Studia Universitatis "Vasile Goldis" Arad: Economics Series 29(2): 1-16.

Friz, K. and Günther, J. (2021). *Innovation and economic crisis in transition economies*. Eurasian Bus Rev **11,** 537–563

Damodaran, A. (2001). Corporate Finance: Theory and Practice. *2nd International Edition, John Wiley & Sons,* New York.

Gohar M.Z. (2019). The concept of intellectual capital and intellectual capital management Theoretical background

www.rsepconferences.com CONFERENCE PROCEEDINGS/FULL PAPERS ISBN: 978-605-70583-6-2/March 2022

Rus, A.I.D., Achim, M.V., Bodescu, N.C. pp.128-136

Jian X. and Yi Z. (2021). Does Intellectual Capital Measurement Matter in Financial Performance? An Investigation of Chinese Agricultural Listed Companies

Mačerinskienė, I. and Survilaitė, S. (2019). Company's intellectual capital impact on market value of Baltic countries listed enterprises. *Oeconomia Copernicana, 10*(2), 309–339. doi: 10.24136/oc.2019.016

Mironiuc M. (2009). *Analiză economico-financiară. Performanţă, poziţie financiară, risc*. Ed. Universității „Alexandru Cuza", Iași

Muslih M., Wati T., Augustin R., Lestari A.F.R. (2021). Intellectual Capital Disclosure, *International Journal of Multidisciplinary Research and Publications*

Nuryaman, N. (2015). The Influence of Intellectual Capital on The Firm's Value with The Financial Performance as Intervening Variable, Indonesia. *Procedia - Social and Behavioral Sciences* 211(25): 292-298.

Ominum O.G. (2019). Intellectual Capital Management and Economic Development in a Quasi-Information Society

Rus A.I.D., Anghel I., Achim M.V., Borlea S.N. (2018). Does intellectual capital boost the financial performance? Case study of pharmaceutical companies. *The Valuation Journal, National Association of Romanian Valuers*, vol. 13(2), pages 101-119.

Rus, A. I. D., Achim, M. V., S. N. Borlea (2019). Theoretical and Methodological Approaches on the Intellectual Capital. Studia Universitatis "Vasile Goldis" Arad. *Economics Series* Vol 29 Issue 2

Shahveisi, F., Khairollahi, F., Alipour, M. (2018). Does ownership structure matter for corporate intellectual capital performance? An empirical test in the Iranian context. *Eurasian Business Review* **7,** 67–91

Sumedrea S. (2013). Intellectual Capital and Firm Performance: a Dynamic Relationship in Crisis Time. *Procedia Economics and Finance*, Volume 6, pages 137 – 144

Todericiu R. and Stanit A. (2017). Intellectual Capital, the main driver for successful businesses. *Revista Economica* 16:1, Volume 18, Issue 34

Xu J. and Li. (2020). The interrelationship between intellectual capital and firm performance: evidence from China's manufacturing sector. *Journal of Intellectual Capital*

https://www.wharton.upenn.edu