The Impact of Investments in Intangible Assets and Implications on SMEs' Performance. A Systematic Literature Review

Roxana-Gabriela Mozolea
"Alexandru Ioan Cuza" University of Iasi,
Doctoral School of Economics and Business Administration, Romania
roxana.mozolea@yahoo.com
Sorin Gabriel Anton
"Alexandru Ioan Cuza" University of Iasi,
Faculty of Economics and Business Administration, Romania
sorin.anton@uaic.ro

Abstract

Investments in intangible assets have become a strategic approach that has led to numerous benefits and boosts the firms' performance. Academics have studied the process, but there is no complete picture of how intangible resources impact SMEs' performance, this being the main motivation of the paper. The methodology applied is a systematic literature review and it consisted in applying a pre-selected criterion for retrieving the articles from the Web of Science database. The analysis showed that the impact of investments in intangible assets and implications on SMEs existing literature can be divided into six general lines of research. Scholars can use the study as a starting point to fill in research gaps relating to the relationship between intangible assets and SMEs' performance, while practitioners can use the data to determine the effects of this type of investment and how to use efficiently SMEs' resources.

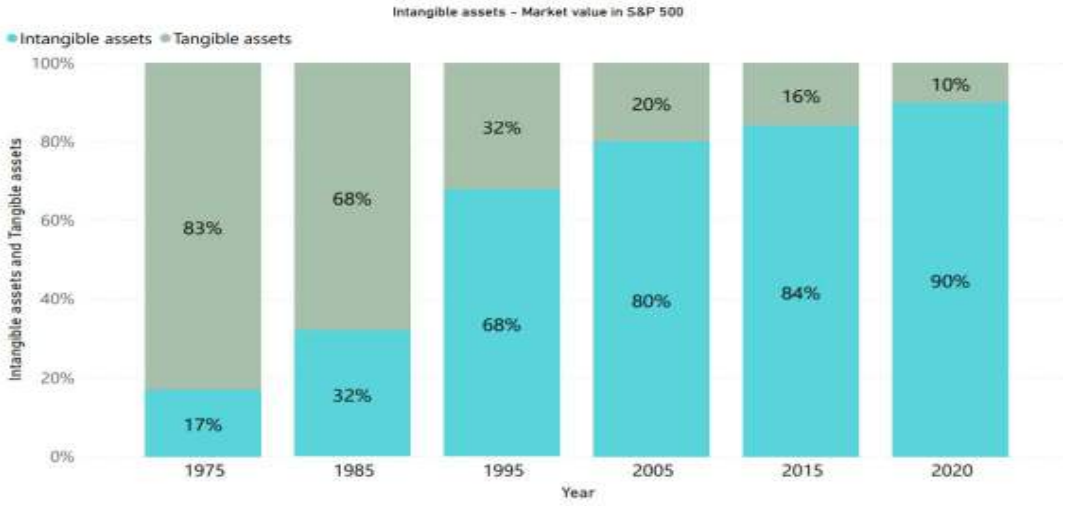
Key words: intangible assets; systematic literature review; SMEs; performance; intangible resources.
J.E.L. classification: E22, G32, M20, O34.

1. Introduction

Intangible assets have become in the latest decades one of the most important factors in increasing profitability, developing innovation, and creating a competitive advantage for companies to stand out for the consumers (Ivanov and Mayorova, 2015; Khan et al., 2018; Ocak and Findik, 2019; Piekkola, 2020). The value of intangible assets has increased due to technological evolution, the boost of brands' importance, the need for differentiation and the globalization process. Definitions and classifications of intangible assets are diverse, but the common theory presents them as non-monetary assets, without physical substance, that bring internal economic advantages, respectively increasing market value (McClure, 2009).

The importance of intangible assets can be easily observed in various statistical research conducted both in the United States of America and Europe. In 2019, Aon and Ponemon Institute LLC showed the evolution of intangible versus tangible assets market value from top 5 S&P 500 companies, the timeframe selected being 1975 – 2018. The results show a clear change, starting in 1975 with a value of 0.122 $T intangibles and 0.595 $T tangibles versus 2018 with a value of 21.03 $T intangibles and 4 $T tangibles. Also, in 2020, Ocean Tomo conducted a study that showed the changes in the weight of intangibles assets, considering the market value, from companies included in the S&P 500 over the last 45 years. In 1975, 17% of the total market value was represented by intangible assets and in 2020 they weighted 90%, highlighting how relevant are in todays' business (see Figure 1).

Figure no 1. Intangible assets – Market value in S&P 500



Source: Ocean Tomo, LLC Intangible Asset Market Value Study, 2020

The evolution of investments in intangible assets, both in public and private companies, was observed also in European states. In 2018, Eurostat and European Central Bank led a study that analyzed the growth of investments in intangible assets; one of the results showed that during the last 20 years, the investments in intellectual property exceeded the total investments in tangible assets.

Intangible assets have always been a complex and controversial topic both for accountants and economists, but also for national and international institutions that are in charge of managing and evaluating them. Since the 1920s', when assets were recorded according to their estimated value, intangible assets have become an object of attention. After the severe worldwide economic depression that started in 1929, the accountants have changed the recording method of assets, respectively the new criteria for recognizing them were pre-existing transactions. Once the IT industry and the technological field has advanced so rapidly and the focus shifted from the production area to services, companies have built and developed strong competitive advantages based on intangible assets.

Analyzing the accounting regulations, we can observe that the main types of intangible assets are goodwill, brand equity, intellectual property (trademarks, patents, copyrights), research and development. Considering this perspective, Stolowy and Jeny-Cazavan (2001) present two ways of defining intangible assets: a conceptual approach by developing a definition and a practical approach, by creating a list of assets that can be recognized in the future. Most of the countries use a combined method designed to offer more clarity by using a definition and a list.

This paper aims to analyze the existing literature regarding investments in intangible assets and how they influence SMEs' performance. To address the research goal, we investigated the papers indexed on the Web of Science database under a specific criterion and developed a systematic literature review. As such, this study provides a new perspective of the current state of literature and numerous research opportunities.

The study is structured as follows: theoretical background, the methodology applied in the paper selection, the findings and the theoretical and practical implication of the findings.

2. Theoretical background

Two of the most important international accounting standards-setting bodies, the International Accounting Standards Board (IASB) and the U.S Securities and Exchange Commission (SEC) developed different sets of accounting and financial standards: IFRS, respectively U.S. GAAP. The first set of standards is used in more than 120 countries; for example, all public companies from European Union are compelled to apply these rules in any financial report or presentation. The second set of standards applies only in the U.S., where all public and private firms are forced to respect them,

except private, foreign companies that can apply IFRS. Numerous specialists analyzed these regulations and observed both similarities and differences, including the topic of interest of this article, intangible assets. Over the last decades, these entities are working together to adapt and to align the standards, to avoid misunderstands and to offer more clarity.

Under IFRS, intangible assets are regulated accordingly to the standards from IAS 38, issued by IASB. They are illustrated as non-monetary assets, without physical substance, identifiable either as separate or as a result of contractual or other legal rights. U.S GAAP presents a similar definition, without the identifiable characteristic, but it is mentioned in the recognizing criteria.

One of the first efforts to create an international accounting standard regarding intangible assets was the issue of IAS 9 in 1978 which stated that research and development costs should be recorded as expenses unless the outcome of these activities is an asset. Since that moment, numerous modifications were made to clarify different aspects like amortization and depreciation or businesses combination.

According to IAS 38, intangible assets are classified from numerous perspectives: how they were acquired (bought - by separate purchase or as a part of a business combination or internal generated), by lifetime (determined – license or unlimited – reputation) and by content and use (intellectual capital, intellectual property, technological applications). Many researchers proposed other methods of classification. For example, Lev (2001) recommended an economic approach that separates intangible assets based on innovation, human resources and organization, explaining their value for the companies. In a subsequent study, Lev (2005) changes slightly the presented classification: he shifts the focus from innovation to other categories focused on products/services and relations with clients, highlighting the importance of customers loyalty and the value of the brands. Another perspective, based on value-added, is presented by Mortensen et al. (1997) by dividing intangible assets into four categories: innovation capital (research and development), structural capital, contracts, market capital, and goodwill.

Criteria for recording financial investments in an intangible asset as an expense is respecting the above-stated definition, the certification of a future economic advantage and correct identification of the cost. IAS 38 presents some challenging examples where the cost is difficult to be determined: internally generated brands, internal clients list, etc. Usually, companies divide the process of generating internal intangible assets into two stages: the research phase and the development phase. If there is no clear distinction between these two stages, all inquired expenses are recorded into the research phase.

The debates and the interest in intangible assets have been in a constant evolution, numerous authors focusing on the competite advantages they bring into the companies. Mehta and Madhani (2008) analyzed the existing literature review on intangible assets and they concluded that there is a direct, positive relation with companies' performance, being reliable sustianbility indicators. For public companies, investments in non-physical assets improve financial performance (Salamudin et al., 2010; Quan et al., 2020), increase the market value (Leliuc, 2018) and influence positively the liquidity ratios (Mendoza et al., 2017). Hintzmann et a. (2021) published a study where they analyzed the implications of intangible assets on work productivity, the sample consisted in data from 18 European countries with a time-frame of 22 years. The results showed that intangible assets, especially R&D and marketing have a strong impact on increasing work productivity. In countries from Northern Europe, intangible assets have a stronger impact than tangible assets, in Central Europe the results are opposite and in the Southern Europe, the impacts are comparable.

Considering both the interest of national and international regulating bodies on intangible assets, and also the effort invested in numerous studies that focused on this topic, we intend to make sense of the current research landscape and highlight many promising areas for future-related analysis by evaluating the current body of literature.

3. Research methodology

Numerous studies confirm the development and the importance of intangible assets by conducting a comparative analysis between the market value and the book value of the companies. For example, McClure (2009) selected 3.500 U.S. large businesses and showed that the book value is only 28% from the market value, in contrast to the year 1975 when deviation was only 5%. The same

conclusion was made by Ocean Tomo (2010) when they analyzed the value from financial reports, which was only 20% of the market value. Despite numerous articles related to intangible assets and companies' performance, there remain several gaps in the literature, one of them being if and how investments in intangible resources influence small and medium-sized enterprises (SMEs) economic results.

The choice of interest in small and medium-sized enterprises (SMEs) is based on the fact they are a core part of economies around the world, especially for the emerging and developing countries in which they generate important financial revenues and contribute to job creations, respectively reducing the unemployment (Bell, 2015). The World Bank states that 90% of worldwide businesses are SMEs and they sustain more than 50% of the employment, in emerging economies contributing by 40% to the GDP. In addition, their research estimates an increase in job demand that will be partly covered by SMEs. The World Bank emphasizes the role of SMEs and why they should be a top priority for governments, themselves offering important financial support for creating and developing this economic area. There are numerous financial support programs designed for SMEs; for example, European Union provides access to many resources for implementation and development, considering that 99% of registered businesses are SMEs.

The motivation of this paper is to assess the existing literature on investments in intangible assets and the implications on SMEs' performance, to examine the current state of specialized literature development and to discover future research opportunities. To the best of our knowledge, a detailed literature review on the impact of investments in intangible assets and implications on SMEs' performance doesn't exist up to date.

The methodology selected for rigorously analyzing the research conducted on the above-stated topic is a **systematic literature review**. This approach has been used mainly in medical science, but it is increasing in the economic field due to its advantages that imply a transparent, efficient, and objective (Snyder et al., 2016; Fombelle and Kristensson, 2016). By conducting a systematic literature review, it can be determined if there is a constant across articles, if there are different results and what may be the source and to detect possible directions for expanding a certain subject. In order to answer a clearly articulated objective, a systematic literature review (SLR) identifies, selects, and critically assess information (Dewey and Drahota, 2016). Before the systematic review is undertaken, the criteria should be explicitly outlined in a clearly defined methodology or plan. It's a transparent, thorough search that spans several databases and grey literature and can be replicated by other academics. It entails devising a well-thought-out search strategy that focuses on a certain topic or answers a specific topic. Within established timeframes, the review indicates the sort of information searched, criticized, and reported. The review must include the search terms, search tactics and limits.

Papers selection was conducted in two phases. The first part was based on retrieving papers related to intangible assets and SMEs from Web of Science, a complex citation database that contains more than 80 million records from 256 disciplines. In the research process, there were used several expressions (*intangible assets*, *SMEs, small and medium-sized enterprises, small and medium enterprises*, *intangible resources) in order* to discover relevant articles and to minimize redundancy. Papers had to meet the following criteria for inclusion: (a) written in the English language & published in a peer-reviewed academic journal; there were excluded books, book chapters, non-refereed publications, and discussion papers.

The second phase of the selection process is to select the papers with high scientific quality, by ranking the journals based on SJR score and H index score. This information is retrieved from the website http://www.scimagojr.com; SJR (Scimago Journal Rank) score is a quality measure of a journal and the H index shows the number of articles and the number of citations. The Journal Citation Reports published by Thomson Reuters gives annually rankings of science and social science journals named Impact Factor (IF) data. Quartiles are used for rankings: Q1 denotes the top 25% of the IF distribution, Q2 for the middle-high position (between top 50% and top 25%), Q3 middle-low position (top 75% to top 50%), and Q4 the lowest position (bottom 25% of the IF distribution).

4. Findings

The first phase of the selection process produced 100 articles. The second part consisted in ranking the journals of the 100 papers and selecting only the ones with SJR score above 1 and included in Q1 & Q2 (68 articles - Table 1) in line with Grimaldi et al. (2017), Torres-Carrión et al. (2018) and Nichita (2019).

Table no. 1 Journals of the articles selected in phase 1

Source Title	SJR Best Quartile	SJR	H index	Count of Articles
JOURNAL OF INTELLECTUAL CAPITAL	Q1	1,26	89	7
SUSTAINABILITY	Q1	0,61	85	5
SMALL BUSINESS ECONOMICS	Q1	2,20	131	5
INTERNATIONAL MARKETING REVIEW	Q1	1,20	89	2
JOURNAL OF KNOWLEDGE MANAGEMENT	Q1	1,84	113	2
BRITISH FOOD JOURNAL	Q2	0,51	80	2
QUALITATIVE MARKET RESEARCH	Q2	0,65	54	2
ECONOMIA POLITICA	Q2	0,47	13	2
AMFITEATRU ECONOMIC	Q2	0,34	20	2
EUROPEAN JOURNAL OF INNOVATION MANAGEMENT	Q2	0,78	63	2
INTERNATIONAL ENTREPRENEURSHIP AND MANAGEMENT JOURNAL	Q1	1,34	55	2
JOURNAL OF BUSINESS ECONOMICS AND MANAGEMENT	Q2	0,49	37	2
SOCIAL INDICATORS RESEARCH	Q1	0,82	107	1
MANAGEMENT DECISION	Q1	0,92	98	1
JOURNAL OF ORGANIZATIONAL AND END USER COMPUTING	Q2	0,46	32	1
HELIYON	Q1	0,46	28	1
EUROPEAN JOURNAL OF SCIENCE AND THEOLOGY	Q1	0,49	18	1
INTERNATIONAL BUSINESS REVIEW	Q1	1,77	95	1
JOURNAL OF INTERNATIONAL BUSINESS STUDIES	Q1	4,82	195	1
CREATIVITY AND INNOVATION MANAGEMENT	Q1	1,15	60	1
JOURNAL OF SUSTAINABLE TOURISM	Q1	1,73	103	1
INTERNATIONAL FOOD AND AGRIBUSINESS MANAGEMENT REVIEW	Q2	0,47	35	1
MATHEMATICS	Q2	0,50	32	1
INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP AND INNOVATION	Q2	0,60	16	1
SERVICE INDUSTRIES JOURNAL	Q1	1,18	66	1
INTERNATIONAL JOURNAL OF MANPOWER	Q2	0,44	58	1
EXPERT SYSTEMS WITH APPLICATIONS	Q1	1,37	207	1
INTERNATIONAL JOURNAL OF ORGANIZATIONAL ANALYSIS	Q2	0,42	25	1
CORPORATE SOCIAL RESPONSIBILITY AND ENVIRONMENTAL MANAGEMENT	Q1	1,52	73	1
INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH	Q1	1,91	142	1
JOURNAL OF SCIENCE AND TECHNOLOGY POLICY MANAGEMENT	Q2	0,47	16	1
BUSINESS STRATEGY AND THE ENVIRONMENT	Q1	2,12	105	1
KYBERNETES	Q2	0,31	40	1
AGRIBUSINESS	Q2	0,57	43	1
MANAGEMENT RESEARCH REVIEW	Q2	0,56	53	1
JOURNAL OF BUSINESS RESEARCH	Q1	2,05	195	1
OECONOMIA COPERNICANA	Q1	0,59	13	1
JOURNAL OF BUSINESS VENTURING	Q1	7,11	182	1
REVIEW OF INTERNATIONAL BUSINESS AND STRATEGY	Q2	0,56	29	1
JOURNAL OF CLEANER PRODUCTION	Q1	1,94	200	1
EUROPEAN MANAGEMENT JOURNAL	Q1	1,37	102	1
JOURNAL OF ENTREPRENEURSHIP IN EMERGING ECONOMIES	Q1	0,65	15	1
EVALUATION AND PROGRAM PLANNING	Q2	0,56	62	1
JOURNAL OF INFORMATION SCIENCE	Q1	0,50	64	1
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	Q2	0,85	113	1
Grand Total				**68**

Source: Personal approach of the authors

The next step was analyzing the sample reduced to 68 articles from 45 journals, to discover which of them are in the scope of our research. After a preliminary screening of the abstract of the emergent articles, we eliminated those that do not fall under the research question, the final pool consisting of 22 papers (Table 2).

Table no. 2 Articles selected in phase 2

Author Full Names	Article Title	Source Title
Agostini, Lara; Caviggioli, Federico; Filippini, Roberto; Nosella, Anna	Does patenting influence SME sales performance? A quantity and quality analysis of patents in Northern Italy	European Journal of Innovation Management
Agostini, Lara; Nosella, Anna	Enhancing radical innovation performance through intellectual capital components	Journal of Intellectual Capital
Amadieu, Paul; Viviani, Jean-Laurent	Intangible Effort and Performance: The Case of the French Wine Industry	Agribusiness
Anderson, Brian S.; Eshima, Yoshihiro	The influence of firm age and intangible resources on the relationship between entrepreneurial orientation and firm growth among Japanese SMEs	Journal of Business Venturing
Brown, Dalila; Foroudi, Pantea; Hafeez, Khalid	Marketing management capability: the construct and its dimensions An examination of managers' and entrepreneurs' perceptions in a retail setting	Qualitative Market Research
Carmona, Pedro; Momparler, Alexandre; Gieure, Clara	The performance of entrepreneurial small- and medium-sized enterprises	Service Industries Journal
Crema, Maria; Verbano, Chiara	Managing Intellectual Capital in Italian Manufacturing SMEs	Creativity and Innovation Management
Cucculelli, Marco; Bettinelli, Cristina	Business models, intangibles and firm performance: evidence on corporate entrepreneurship from Italian manufacturing SMEs	Small Business Economics
Dai, Ou; Liu, Xiaohui	Returnee entrepreneurs and firm performance in Chinese high-technology industries	International Business Review
Foroudi, Pantea; Gupta, Suraksha; Nazarian, Alireza; Duda, Marta	Digital technology and marketing management capability: achieving growth in SMEs	Qualitative Market Research
He, Xiaoyun; Lu, Haibing	Catch a Fad or Capture a Value? Social Media Leverage in SMEs	Journal of Organizational and End User Computing
Khalique, Muhammad; Hina, Khushbakht; Ramayah, T.; bin Shaari, Jamal Abdul Nassir	Intellectual capital in tourism SMEs in Azad Jammu and Kashmir, Pakistan	Journal of Intellectual Capital
Khan, Kashif Ullah; Atlas, Fouzia; Ghani, Usman; Akhtar, Sadia; Khan, Farhan	Impact of intangible resources (dominant logic) on SMEs innovation performance, the mediating role of dynamic managerial capabilities: evidence from China	European Journal of Innovation Management
Khan, Sher Zaman; Yang, Qing; Waheed, Abdul	Investment in intangible resources and capabilities spurs sustainable competitive advantage and firm performance	Corporate Social Responsibility and Environmental Management
Knight, Gary A.; Kim, Daekwan	International business competence and the contemporary firm	Journal of International Business Studies
Nunes, Paulo Macas; Almeida, Alcina	The Quadratic Relationship between Intangible Assets and Growth in Portuguese SMEs	Amfiteatru Economic

Ramos-Gonzalez, Maria del Mar; Rubio-Andres, Mercedes; Sastre-Castillo, Miguel Angel	Effects of socially responsible human resource management (SR-HRM) on innovation and reputation in entrepreneurial SMEs	International Entrepreneurship and Management Journal
Rua, Orlando Lima	From intangible resources to export performance: Exploring the mediating effect of absorptive capabilities and innovation	Review of International Business and Strategy
Rua, Orlando; Franca, Alexandra; Fernandez Ortiz, Ruben	Key drivers of SMEs export performance: the mediating effect of competitive advantage	Journal of Knowledge Management
Seo, Hyeon Sik; Kim, YoungJun	Intangible Assets Investment and Firms' Performance: Evidence from Small and Medium-Sized Enterprises in Korea	Journal of Business Economics and Management
Strielkowski, Wadim; Guliyeva, Aida; Rzayeva, Ulviyya; Korneeva, Elena; Sherstobitova, Anna	Mathematical Modeling of Intellectual Capital and Business Efficiency of Small and Medium Enterprises	Mathematics
Ying, Qianwei; Hassan, Hazrat; Ahmad, Habib	The Role of a Manager's Intangible Capabilities in Resource Acquisition and Sustainable Competitive Performance	Sustainability

Source: Personal approach of the authors

The content analysis can be divided into some broad categories: intellectual capital and SMEs performance (6 articles); intangible assets/resources and SMEs performance (4 articles); intangible assets effect on innovation and innovation impact on SMEs' performance (4 articles); marketing and social media and SMEs' performance (3 articles); intangible resources and SMEs' export performance (2 articles); entrepreneurial orientation and capabilities and SMEs' performance (2 articles); international business competence (IBC – intangible asset) and international performance of SMEs (1 article).

4.1 Intellectual capital and SMEs' performance

Crema and Verbano (2014) analyzed the relationship between intellectual capital (IC) and Italian manufacturing SMEs. According to existing literature, authors select human capital (HC), internal structural capital (ISC) and relational capital (RC). Conclusions show that Italian manufacturing SMEs have well-developed HC, moderately developed RC and heterogeneous results for ISC. The firm's performance is positively influenced by IC components.

Agostini and Nosella (2017) focused on the relationship between intellectual capital (IC) components (human capital, relational capital and organizational capital) and radical innovation performance. The sample contains 975 Italian SMEs and the applied methodology is hierarchical regression. The conclusion is that human capital positively influences the relational and organizational capital, which enhance radical innovation performance. This means that employees represent a critical part of the growing reputation and innovation of SMEs.

Khan et al. (2018) published a study on 329 Pakistani SMEs, respectively if sustainable competitive advantage (SCA) and firm performance (FP) are positively influenced by intellectual capital (IC), financial capability (FC), and corporate social responsibility (CSR). The methodology used is the structural equation model (SEM) and data was collected through surveys. The conclusions show that IC, FC and CSR have a strong, positive impact on SCA and FP. In addition, SCA has a mediating role in the relations between FC, respectively CSR and FP, and it emphasizes the importance of investments in IC and intangible resources in general.

Khalique et al. (2018) proposed a study regarding the influence of intellectual capital (IC) on the organizational performance of a sample of Pakistani SMEs from the tourism industry. According to scientific literature, IC incorporates six components: human capital, customer capital, structural capital, social capital, technological capital and structural capital (Khalique et al., 2011). The research concluded that IC, as an overall concept, has a positive impact on organizational performance. Separately, the most influential components were the customer and technological

capital. Human capital, social capital and spiritual capital are characterized with medium influence and structural capital appears as a negatively significant variable.

Ying et al. (2019) proposed a study regarding the impact of managers' intangible capabilities in sustainable competitive performance with a mediating role of resource acquisition. The sample consists of data from 384 owners/managers of Pakistani SMEs, collected through questionnaires. The results show that intellectual capital (IC) is relevant in both resource aquation and sustainable competitive performance. In addition, especially SMEs that have limited resources should enhance managers intangible capabilities in resource aquation.

Strielkowski et al. (2021) used mathematical models to test the influence of intellectual capital (IC) on 206 SMEs from CIS countries. IC components selected for this study are human capital, structural capital, and customer capital. The findings show that IC is not utilized by the management of SMEs in CIS countries, but it is demonstrated that it positively influences the performance, in combination with financial resources and with some important reservations.

The above articles show that intellectual capital brings valuable advantages to SMEs that invest in this type of intangible assets and both managers and employees are a key part of businesses development.

4.2 Intangible assets/resources and SMEs' performance

Nunes and Almeida (2009) published an article regarding the impact of intangible assets on the Portuguese SMEs' performance. The sample was selected from the SABI database and authors retrieved information from 1383 SMEs during 1999 and 2005. The results show that it exists a quadric relation between intangible assets and SMEs growth, the intangible resources being a catalyzing factor. In addition, the findings reflect a negative relationship between both the age and the size of the firms and the growth of SMEs; the performance is also accelerated by internal finance.

Amadieu and Viviani (2010) published a study that focuses on the influence of intangibles on the financial performance of wine industry French SMEs. The fundamental takeaway is that investing in intangibles does not ensure financial success for French wineries. Intangible expenses have a favourable impact on commercial performance for enterprises more involved in the marketing process, such as wholesalers, but there is no transition into financial performance, implying that cash flows created by these investments are insufficient.

Cucculelli and Bettinelli (2014) focused on 376 Italian SMEs over 10 years (2000-2010) to analyze the performance by business models and investments in intangible assets (R&D and advertising on sales). The used statistical method is regression and selected dependent variables for quantifying performance are return on sales (ROS) and total factor productivity (TFP). The results show that SMEs' performance is positively influenced by both business models changes and investments in intangible assets, separately and together. In addition, the empirical evidence shows that business model innovations support more effectively the ROS and intangibles influence more the TFP.

Seo and Kim (2019) analyzed in their paper the impact of investments in intangible assets on Korean SMEs' performance. The sample consists of 173 production firms that invest in intangible assets: human capital, marketing and R&D. Statistical method applied is regression, the dependent variable being firm performance and the independent variables being the above investments in intangible assets. The results show that SMEs' performance and market value is positively influenced by investments in intangible assets and that should motivate firms from both public and private sector from Korea to invest in this kind of assets.

Intangible assets are valuable investments that influence positively SMEs' performance. According to the journals above, the most widely used methodology is statistical analysis, respectively regression.

4.3 Intangible assets effect on innovation and innovation impact on SMEs' performance

Carmona et al. (2012) published a comparative study on SMEs' performance considering the innovative or non-innovative characteristics. The sample contains in 3.217 firms: 2.471 non-innovative and 746 innovative. Authors use intangible assets as a proxy for innovation (Lev, 2001). The results show that innovative firms perform better than non-innovative ones and they have numerous advantages, including lower tax rates.

Agostini et al. (2014) analyzed the impact of patents on the performance of 196 Italian SMEs. The methodology applied consists of cross-sectional time-series regression. Patents are one of the most important and highly used intangible assets. The results show that overall, patents influence positively SMEs' performance, but the increase in the number of patents doesn't imply an increase in achievements. One of the most relevant findings is that SMEs should prioritize the investments in patents and should select only the patents that relate to the core part of the business and that bring value to the firm.

Khan et al. (2020) published an analysis on the relation and influence of intangible resources (dominant logic) on Chinese SMEs innovation performance. In addition, the research questions focus on the mediating role of dynamic managerial capabilities. Dominant logic consists of two parts: information filter (pro-activeness and external orientation) and routines (learning and routines and dynamic managerial capabilities refer to managerial human capital, managerial social capital and managerial cognition. The results show that innovation performance is positively impacted by the use of intangible resources, respectively dominant logic. Another conclusion of this study, that confirms the previous findings in the literature review, highlights the importance of managerial capabilities as they are valuable intangible resources, and they bring valuable competitive advantages.

Ramos-González et al. (2020) analyzed the influence of socially responsible human resource management (SR-HRM) on two of the most important intangible assets, innovation and reputation. The sample consists of 261 SMEs and the methodology was partial least squares (PLS). Results show intangible assets have a strong relation, while innovation has a significant and positive influence on reputation in SMEs. In addition. SR-HRM impacts positively both SMEs innovation and reputation level, essential aspects for firms' performance.

The results show that investments in intangible assets impact positively innovation and the performance of SMEs. In addition, they bring competitive advantages and help businesses in differentiation.

4.4 Marketing and social media and SMEs' performance

He and Lu (2016) focused on the impact of using social media on SMEs' performance. The sample consists of 146 U.S. SMEs. The results confirm the previous findings from the specialized existing literature (Fournier and Avery, 2011; Kaplan and Haenlein, 2010; Laroche et al., 2013), respectively that investments in social media can create valuable intangible assets. In addition, SMEs' managers should focus on the online community that is built due to social media activity and that these efforts bring value and differentiation in long term.

Brown et al. (2019) focused in their paper on the relationship between intangible assets and marketing capabilities. Data was gathered through 19 interviews with managers and entrepreneurs from 12 UK SMEs from the retail industry. The findings of this study show that a company's communication with internal and external stakeholders about critical aspects of management, marketing, customer relationships, communication, innovation, and performance skills can become clearer and more valued through intangible assets.

Foroudi et al. (2019) proposed an article with the intent to assess the relation between digital technology, tangible/intangible assets and marketing management capabilities in the case of UK SMEs. The results show that marketing capabilities are strongly influenced by digital technology and they impact the growth of SMEs' performance.

Data were collected mainly through surveys and the findings recommend to managers invest in marketing activities and social media activity to create customers loyalty and to engage communities for the SMEs' performance.

4.5 Intangible resources and SMEs' export performance

Rua, Franca and Ortiz (2018) focused on what are the main determinants of 247 Portuguese SMEs' export performance (EP). The authors developed a model to test if entrepreneurial orientation, intangible resources, and absorptive capabilities have a positive relation with EP and if this relation is mediated by competitive strategies, cost leadership or differentiation. Intangible resources consist of reputational resources, access to financial resources, human resources, cultural resources, relational resources and informational (knowledge) resources (Morgan et al., 2006). The results show

that intangible resources positively influence the development of cost leadership and even more, differentiation. There is no direct connection between intangible resources and EP, but through strategy, they become key drivers to SMEs' export performance.

On a similar sample, Rua (2018) published another study that focused on the impact of intangible assets on export performance, taking into account the mediating role of absorptive capabilities and innovation. Intangible resources have a positive, significant, and direct impact on absorptive capabilities and export performance but no significant and direct impact on innovation. Absorptive capabilities have no influence on the export performance, but innovation has a positive, significant, and direct impact on export performance and it also implies a mediating effect on the relationship between intangible resources and export performance.

Both articles show that SMEs' export performance is positively influenced by investments in intangible resources, either by being key drivers or by direct impact.

4.6 Entrepreneurial orientation and capabilities and SMEs' performance

Anderson and Eshima (2013) published a study on the relationship between entrepreneurial orientation (EO) and firm growth, under the influence of firm age and intangible resource advantage on a sample of 207 Japanese SMEs. Intangible resource advantage consists in measuring employee know-how, managerial systems, company reputation, intellectual property, and informal social networks. The authors applied hierarchical linear regression analysis, and the conclusions show that even though EO increases, without intangible resource advantage, the firms don't significantly grow; also, younger SMEs can experience higher growth levels in combination with higher EO than the older firms.

Dai and Liu (2009) proposed a comparative analysis between returning and local entrepreneurs and their impact on Chinese SMEs' performance from high-tech industries. The results show that returning entrepreneurs (who studied or worked in OECD countries) use their intangible resources in terms of commercial and technological know-how and overperform the local entrepreneurs and positively influence companies' growth.

The conclusions of the above studies show that entrepreneurial orientation combined with intangible capabilities influence positively the growth of Chinese and Japanese SMEs.

4.7 International business competence (IBC – intangible asset) and international performance of SMEs

Knight and Kim (2008) analyzed what is the connection between international business competence (IBC) and the international performance of SMEs. According to the specialized literature, IBC is itself an intangible, a concept that includes intangible assets and competencies (Lambe, Spekman and Hunt, 2002; Ritter and Gemunden, 2004; Johnson and Sohi, 2003; Johnson et al., 2006). Considering that the scope of the research was analyzing SMEs that developed abroad, the authors included: in IBC international orientation, international marketing skills, international innovativeness, and international market orientation. The data was gathered through case study interviews (16 SMEs – first phase) and surveys (354 SMEs – second phase). The results emphasize that IBC is important in the internationalization of companies, especially for SMEs, that don't rely on the same amount of financial and tangible assets as large companies do.

5. Conclusions

This paper provides a systematic review of the scientific literature about the impact of investments in intangible assets on SMEs' performance. In the last decades, the importance of intangible resources has increased dramatically, and the growth of businesses has been directly connected to this type of asset.

We conducted a systematic literature review that was based on a sample of 22 high-quality peer-reviewed articles obtained through a rigorous data collection process and selection from Web of Science. After proceeding with the pre-selected criteria and understanding which papers apply to our research questions, the 22 articles were classified into five macro themes: intellectual capital and SMEs' performance (6 articles); intangible assets/resources and SMEs' performance (4 articles); intangible assets effect on innovation and innovation impact on SMEs' performance (4 articles);

marketing and social media and SMEs' performance (3 articles); intangible resources and SMEs' export performance (2 articles); entrepreneurial orientation and capabilities and SMEs' performance (2 articles); international business competence (IBC – intangible asset) and international performance of SMEs (1 article).

To the best of our knowledge, these are the most important articles regarding the impact of investments in intangible assets on SMEs' performance. The results of the analysis show that intangible assets are positive influencers, either as a whole concept or as a separate intangible resource like innovation, marketing, or entrepreneurial orientation on businesses development.

Several academic and practical implications are presented in our study. Firstly, through this paper, we bring valuable information regarding the status of the research – the impact of the investments in intangible assets on SMEs' performance. The conclusions show that there is a research gap in the existing literature and there are numerous future directions to test and validate the findings of the analysis. Secondly, managers and entrepreneurs should analyze the above relationship and consider that the resources of SMEs are limited, and any investment must have profitable returns.

Limitations of our analysis are mainly related to our paper selection process and choice of data. Our source was the Web of Science database and other researchers might conduct this literature review by using other sources, for example, Scopus. In addition, the criteria can be changed and include other words or expressions to find relevant articles to observe the constant effect of investments in intangible assets.

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