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METHODOLOGICAL APPROACH FOR THE ACCOUNTING RECOGNITION OF KNOWLEDGE MANAGEMENT IN COLOMBIAN SMEs.

Freddy Mestre Gómez Ph.D. (c)¹, James Pérez-Morón Ph.D. (c)² , Ph.D. Oscar Torres Yarzagaray³

Abstract

Colombian MSMEs represent 98% of the total business fabric registered in chambers of commerce, however, within this conglomerate are SMEs, which, having a representation of around 8% at the national level, are considered the best companies for the reception of foreign investment, creation of productive alliances, generation of massive employment and ultimately excellent coordination with micro and large entrepreneurs. But, in Colombia there is no evidence of accounting recognition of knowledge management, so companies located in the sector under study do not have assurance of their knowledge from the training of human talent, which reduces their competitive capabilities. Therefore, through qualitative research, projective typology and observational design, the aim is to carry out the methodological approach of a model capable of accounting for the entire knowledge management process of Colombian SMEs.

Keywords: *Knowledge Management, Accounting Recognition, Accounting Processes, Competitiveness, SMEs.*

Introduction

Knowledge management is fundamental for the generation of well-being in nations, such is the case of countries such as Japan and South Korea who, after facing periods of war, exceeded the needs generated by these from the investment in human talent. and their training in advanced knowledge. The case is not different for Colombia, a country in which more than 50 years of internal armed conflict has left the social fabric deteriorated and widened the social gaps, for which the research focuses on promoting knowledge management in the country's. SMEs where 8% of the business fabric is part of this business category, which is the best ally of large and micro companies. However, international accounting and financial information standards do not

¹Contador Público, Fundación Universitaria Tecnológico Comfenalco. Magister en Finanzas, Universidad Autónoma del Caribe. Estudiante del Doctorado en Administración, Universidad de Cartagena. Docente del Programa de Contaduría Pública, Universidad de Cartagena, Colombia. E-mail: fmestreg1@unicartagena.edu.co; ORCID: <https://orcid.org/0000-0002-0037-0189>

²Universidad Tecnológica de Bolívar, Cartagena, Colombia. ORCID: <https://orcid.org/0000-0001-9808-2400>

³Economista, Universidad de Cartagena. Magister en Logística, Escuela Naval de Oficiales Almirante Padilla, Magister en Gestión de las Organizaciones, Universidad EAN. Doctor en Ciencias Económicas, Universidad del Zulia. Correo Electrónico: ostoyar@hotmail.com. ORCID: <https://orcid.org/0000-0001-6108-0401>.

contribute to the accounting recognition of knowledge management in Colombian companies. In such a way that, to overcome the post-conflict from the business conception, a qualitative research, projective typology and observational design was carried out from which the methodology capable of accountingly linking the entire knowledge management process of Colombian SMEs was generated

Theoretical Foundation

The worldwide trend in accounting and financial information since the development of globalization is regulatory homogeneity, which is why in 1973 and after many professional efforts, the International Accounting Standard Committee (IASC) was born. its acronym in English); responsible for the issuance of international accounting standards (IAS), which have been complemented since 2001, when the IASC was replaced in its role as standard setter by the International Accounting Standard Board (IASB, for its acronym in English). its acronym in English), with the purpose of providing greater rigor in the presentation of financial reports (Zeff , 2012).

Therefore, this set of accounting and financial standards is widely accepted worldwide and is applied through the adoption or adaptation of the legal framework in the country that decides to apply them.

However, section 18 of the IFRS for SMEs aimed at managing intangibles does not include aspects related to the recognition of knowledge management as intangible assets, limiting the accounting recognition of knowledge management to the allocation in the cost or expense of the items spent at the time of creating a product with the capacity to generate wealth from intellectual capital (IASB, IFRS Version for SMEs, 2015). That is to say, it could be indicated that by not recognizing knowledge management at the business level in accounting terms, the presentation in the financial statements of the innovations managed from the organizational task is limited because these inventions will only be recognized as an asset if they are commercially successful, be generators of future economic benefits.

Now, from the business conception, the situation is even more worrying because there is not even a high degree of formality in administrative matters, which is why the possibility of recognizing knowledge management as an intangible is even further away. In addition, there is the difficult reception that SMEs have had in the process of adopting IFRS in Colombia, which does not complete a decade since its adoption and with a cut-off date of 2023, it is only seven years since the issuance of financial statements began. comparatives to IFRS for SMEs, and in this time there have been regulatory modifications with the incorporation of the version of IFRS for SMEs 2015 (Decree 2483 of 2018) and other amendments to the sole regulatory decrees 2420 and 2496 of 2015.

In short, if at the organizational level there are no formalized processes, it may be more difficult to

appropriate knowledge management as an intangible asset. Castaño (2008) points out the main problems of SMEs, as follows:

- a) SMEs have great structural weakness.
- b) They lack strategy and planning, which becomes a limitation for insertion in the international context and puts their continuity in the national market at risk.
- c) Access to lines of credit is difficult and therefore investment in technology, working capital and knowledge is not possible.
- d) The administrative, financial, accounting and operational management is very informal and intuitive.
- e) Lack of a strategic plan that allows the development of managerial management in the medium and long term.
- f) Accounting is not used or useful for making decisions.
- g) Financially, the businessman does not plan the company in the medium and long term, due to lack of knowledge of the tools to carry out this work (p.102).

In addition to the problems mentioned, there are those also pointed out by Marulanda, López & Mejía (2013); authors of the article *Analysis of Knowledge Management in SMEs in Colombia*, who establish the following:

- a) Credit restrictions.
- b) Difficulties in identifying and accessing appropriate technology.
- c) Formalization and absorption of new technologies.
- d) Technical and competitive limitations imposed by production scales.
- e) The poor physical infrastructure.
- f) Lack of business association.
- g) Lack of managers with managerial capacity and strategic thinking.
- h) Difficulty in cementing the articulation of the sector with large companies and with state purchasing systems.

In relation to knowledge management, it is important to mention that nations capable of articulating the business scenario with processes related to knowledge management have seen an increase in their gross domestic production in the short term, and in the case of the present Research whose intention is the accounting recognition of knowledge management shows that many large and small companies worldwide have violated the reliability and reasonableness of the financial information contained in their financial statements since knowledge management is not

evident in these reports (Limone, 2006).

Within companies, according to Sader & Verón (2015), knowledge must be treated as capital, being divided into structural capital for which it can be made explicit and systematized for appropriation within the company, while relational capital refers to the network. of communication with stakeholders or interested users, whether endogenous or exogenous. Finally , intellectual capital is equally important due to its impact on the economic and organizational value of entities, even being capable of influencing the equity value of shares in the capital markets.

Continuing, the assets of a company are generators of future benefits as indicated by international accounting regulations, and this is how intangibles are part of the generation of value and wealth for companies in the current information and knowledge economy, since They are derived from the so-called “Knowledge in Action” (Limone,2006. & Bueno, 2000).

Now, “Knowledge management deals with the critical aspects of adaptation, survival and competition of companies in the face of organizational change and growth; seeks to make the best use of the knowledge available to the organization, creating new one, increasing awareness and understanding in this process” (Pulido, 2017).

It is important to establish that knowledge management is defined by Bukowitz & Williams (1999), cited by Pulido, Ortiz & Uribe (2017) as “a process through which the organization generates wealth from its intellectual or knowledge-based assets” (p.79).

While, for (Perez, 2016) knowledge management is established as “a discipline in charge of designing and implementing systems whose objective is to identify, capture and systematically share the knowledge involved within an organization so that it can be converted into value.” for it” (p.526).

The latter author establishes that the study of knowledge management systematically began in 1990, with the publications of Nonaka & Takeuchi in 1995; and later those of Davenport & Prusak in 1998. However, it highlights that since 1962 there are traces of the use of knowledge management at the organizational level when Kenneth Arrow uses strategies to improve business production after the Second World War.

In the same way, for the post-World War II period, the need to maintain a unified accounting information language worldwide began, because as Zeff (2012) indicates, at this time the process of transnationalization of companies is consolidated, the freedom of markets and in general terms globalization.

Hence, the international accounting and financial reporting standards are defined by Law 1314 of 2009, in its article 1 as: “a single and homogeneous system of high quality, understandable and of mandatory observance, by virtue of which the accounting reports and , in particular, the financial statements, provide understandable, transparent and comparable, relevant and reliable financial information, useful for making economic decisions by the State, the owners, officers and

employees of the companies, current or potential investors and others interested parties, to improve the productivity, competitiveness and harmonious development of the business activity of natural and legal persons, national or foreign” (Congress of the Republic of Colombia, 2009).

In short, when articulating what is indicated by international financial reporting standards and the various definitions of knowledge management, it is imperative to refer to the accounting process as the transversal axis to recognize knowledge management in accounting.

Said accounting process is the step by step for the classification of an economic fact as part of an element of the financial statements initially following the recognition stage, followed by the economic assignment of value (measurement), presentation in the financial statements and disclosure of information.

Methodology

In the strict methodological sense, it is important to define this research under the qualitative phrase, understanding that a phrase is the fusion of several paradigms for the search for the generation of holistic knowledge, in this case, from the worldview of the qualitative approach. The conception of the gnoseological syntagm is mentioned for the first time in the 1990s by Hurtado de Barrera, who proposes in alignment with Kuhn, Feyerabend, Toulmin, Hanson, among other authors with anarchist methodological bases; the construction of holistic knowledge without contradiction between paradigms, without controls and much less without pretensions of doing science from logical, linear and progressive analysis models (Plata, 2006).

The qualitative syntagm can be defined as that capable of “providing descriptive data of the intangible aspects of human behavior, focusing on those contexts of social problems, allowing us to know the relationships or links between people, social entities and culture” (Tinoco, et.al; 2018, p.45). Continuing, the theoretical construction and the results were prepared from bibliographic information related to the topic from different sources which allowed triangulating the information for the purposes of proposing the methodological approach for the accounting recognition of knowledge management in Colombian SMEs. The case study is of utmost importance in the world of research, because a contemporary phenomenon is studied that affects the real life of a community, which will be resolved from the process of triangulation of information between the theoretical propositions and the data analysis (Jiménez and Comet, 2016).

Methodological Approach for the Accounting Recognition of Knowledge Management

The construction of this methodology is based on the accounting process regulated in a standardized manner in the International Accounting and Financial Reporting Standards (IAS/IFRS), in particular the emphasis will be placed on accounting recognition, this being the first step of the accounting process. by which the measurement is subsequently carried out (Initial and Subsequent), the presentation and disclosure of financial information during a taxable period.

Starting from accounting recognition, the methodology is carried out by the fusion of financial accounting plus the different models for measuring qualitative knowledge management, as indicated in the research methodology and of course in the title. a theoretical approach subject to subsequent application in Colombian SMEs.

Configuration of the Methodology for the Accounting Recognition of Knowledge Management in Colombian SMEs

Following what was indicated by Hislop (2005), the paradigm by which the Methodology for the accounting recognition of knowledge management is configured is the Objectivist, which places knowledge as a physical resource of the organization, in comparison, with the According to Stenmark (2001), knowledge is personal and applied through individual and organizational practices. The main advantage of the objectivist paradigm is decision-making within organizations, this being made by the leader who must be a person capable of generating formalized knowledge from his or her academic training, preferably. The methodology can be considered mixed, because it takes into account endogenous (Organizational) and exogenous (Stakeholders) factors, related to knowledge management, however, from both perspectives the analysis is organizational, that is, aspects of the company and its relationship with the internal and external context based on the products and services offered with commercial success in the market, which are designed by the organization's knowledge employees (Nicholson, 2004). Continuing, the methodology will initially have an emphasis on the accounting recognition of knowledge management for those innovative products and services designed in the company or for those that, being acquired, are modified incrementally, contributing this type of innovation to society.

In such a way that, interpreting the definition of an asset of the *International Accounting Standards Board (IASB)*, all the assets of an entity, whether acquired, designed, produced, prepared or controlled by any legal or commercial act of the past by which has reasonable certainty of obtaining future economic benefits, it will be recognized for accounting purposes as an asset. Now, based on the application of the principle of probability, by which the administration of an entity is certain of obtaining future economic benefits from the use of its assets in the daily exploitation of its commercial activity, it is configures the conceptual basis of the Methodology for the recognition of knowledge management, therefore, the financial expenditures destined to knowledge employees participating in the generation of new knowledge at the organizational level must be indexed accounting as intangible assets, with the creation of sub-records or sub-accounts named according to the stages of the project that gives rise to an innovative good or service, provided that there are minimum levels of uncertainty of success on behalf of the new product or service designed. For the IASB, the certainty of information and its accounting treatment is important. For this reason, knowledge management is not regulated; many authors apply different models such as Skandia to measure it. Navigator, Balance Score Card, Intellect, Technology Broker; VAIC Model, among others; but without articulation with the accounting process.

Therefore, the methodology has its conceptual bases in the principles of the accounting process; that have been divided for this methodology of accounting recognition of knowledge management into those of endogenous and exogenous incidence. It is important, before making the classification between endogenous and exogenous, to indicate the concept of all the principles of the accounting process, as follows:

Probability Principle

The concept of probability is used, in the first recognition criterion, with reference to the degree of uncertainty with which the future economic benefits associated with it will reach or leave the entity. The assessment of the degree of uncertainty relating to the flow of future benefits is made on the basis of evidence relating to the conditions at the end of the reporting period that is available when the financial statements are prepared. These evaluations are carried out individually for individually significant items, and in groups for a large population of individually insignificant items.

Begining of uncertainty

Derived from the principle of probability and by professional application of the process of recognition, measurement, presentation and disclosure, it consists of the evaluation of macroeconomic or external variables that may interfere with the cash flow coming to the company.

Accrual Principle

It consists of evaluating, on behalf of the administration, the cash flow that the company will obtain in each annuity or term, and whether or not it is sufficient for its operations. It is necessary to carry out the evaluation based on current and current assets, as well as liabilities that can be compensated.

Start-up principle

Related to the company's capabilities to generate profits, so that its assets continue to rise and thus guarantee the continuity of the company in the economic market.

Principle of Causation

An entity shall prepare its financial statements, except for cash flow information, using the accrual basis of accounting. In accordance with the accrual basis of accounting, items will be recognized as assets, liabilities, equity, income or expenses when they satisfy the definitions and recognition criteria for those items.

Assignment/Association Principle

Every entity must recognize its economic efforts to obtain future economic benefits. This principle has an impact on the causal relationship between costs and expenses; and the income generated from them.

Principle of Realization

Strict compliance with international accounting regulations in the conditions generated for the recognition of income allows total sales to be recorded in the income statement.

Principle of Prudence

Therefore, the correct application of the regulations is intended in order to avoid highly relevant material errors in the financial statements and their detection after the close of the taxable year. After the presentation of the accounting principles, the articulation will be carried out with what is indicated by Huotari and Livonen (2005), who establish the knowledge management processes within organizations, as indicated below:

- i. Knowledge Generation Processes: These allow promoting the generation of new knowledge so that the entity extends its competitive capacity to new products and services; or failing that; to improve existing ones.
- ii. Productive Knowledge Processes: It is the accumulation of knowledge used in the productivity of the company, which is used to generate new products or services.
- iii. Knowledge Representation: Refers to the transfer of knowledge to consumers, communities and knowledge networks where the entity participates.

This is how the application of accounting principles on behalf of the entity's administration along with the processes mentioned above are transversal to all information units or areas of the entity. For greater effectiveness in the accounting recognition of knowledge management at the organizational level of Colombian SMEs, the aforementioned processes will be articulated with different perspectives. This is how Pérez-López (cited by Muñoz-Seca and Riverola, 2001) classifies knowledge based on two dimensions: purpose and origin. Regarding the purpose, it distinguishes two categories:

1. Operational knowledge: It is aimed at solving operational problems. They deal with carrying out operations that cause elementary transformations. Operational knowledge does not consider internal learning problems or interaction with other agents in the environment; the only reality that changes is that subject of the transformation. Some operational knowledge may be: making a jacket, operating a lathe, among others.
2. Reflective knowledge: Concerns the agent's way of thinking or acting. The agent uses this knowledge to reflect on his own action plans, his knowledge and the relationship of both with the other agents involved in the situation. For example, knowing how to negotiate, knowing how to lead a meeting, knowing how to lead a group, knowing how to diagnose.

Regarding the origin of knowledge, consider three categories:

1. **Perceptual knowledge:** It is the result of the accumulation of experience, or cases, in the historical (or perceptual) memory of the agent. They are poorly organized data that accumulate in memory due to the experiences that the agent lives. This knowledge can be used in problem solving if a case recovery mechanism is available that allows obtaining those cases that are similar to the situation that the agent wants to solve. Often the experience that company managers accumulate is perceptual knowledge, an accumulation of experiences that are not necessarily structured. The authors point out that perceptual knowledge and memories are very useful for later experiences, but they are difficult to use in action, to catalog, share and systematically exploit.
2. **Abstract knowledge:** It is composed of both rules about the behavior of the different elements of the problem and the effects of different types of actions on its solution. Also most of the well-established scientific and technological knowledge. Abstract knowledge contains models that can be learned from books or that can be transmitted by simple procedures. The authors point out as examples of abstract knowledge Newton's law of gravitation (dynamic mechanics), the calculation of digital circuits and the rules of logical thinking, among others.
3. **Experimental knowledge:** It is the result of induction on the data of perceptual knowledge. The experience is summarized in a series of hypotheses, sometimes contradictory because they are incompletely stated. Experimental knowledge aims to induce a series of situations, and guided by well-established principles in the field, certain guidelines on the effect of the agent's behaviors. Sometimes these guidelines are incomplete and require interpretation in each specific case.

As indicated above, in the process of knowledge generation, an evaluation of knowledge will be carried out in its perceptual, abstract or experimental origin so that in the next process called productive knowledge, these can be classified as operational and reflective according to their purpose. Hence, the fusion between what was pointed out by Huotari and Livonen & Perez-Lopez can be indicated; with the purpose of promoting the accounting recognition of knowledge management from a dynamic, exponential and sequential perspective. Lastly, for the process of knowledge representation, what was mentioned by Nonaka and Takeuchi (1995), authors with extensive experience in knowledge management, will be taken into account to increase its effectiveness, due to their classification of knowledge into tacit and explicit. The first is that of the being and its essence described by the authors as: non-codable, loaded with subjectivities, values, intuitions, which is acquired through experience and not through formal studies. Meanwhile, explicit knowledge is that formalized in organizations through processes and procedures, which is why it is applicable to all members of the entity. Based on what is indicated for the Knowledge Representation process, we then have that the methodology aims to carry out the organizational formalization of knowledge individually and collectively, that is, everything carried out in an innovative way in the organization must be regulated for the next validity by procedures, protocols and guides.

In this way, the Methodology for the recognition of knowledge management is configured as a window for strengthening the competitive advantages of SMEs and the cultural transformation towards one where continuous learning is the essence of the entity; leaving aside informality and favoring generational change. It is also important because the wealth of a country in the midst of the knowledge society and the knowledge economy is caused by the training of its nationals; and their contributions to the development of new technologies for the sustainable development of society. In short, the following methodology will be applied in all areas of the company based on the configuration indicated here, the application of accounting principles being very important to be certain of obtaining future economic benefits when carrying out the accounting processes. knowledge management and its classification in the different positions of the entity. Finally, the illustration of the configuration presented in the methodology set out below is presented, as follows:

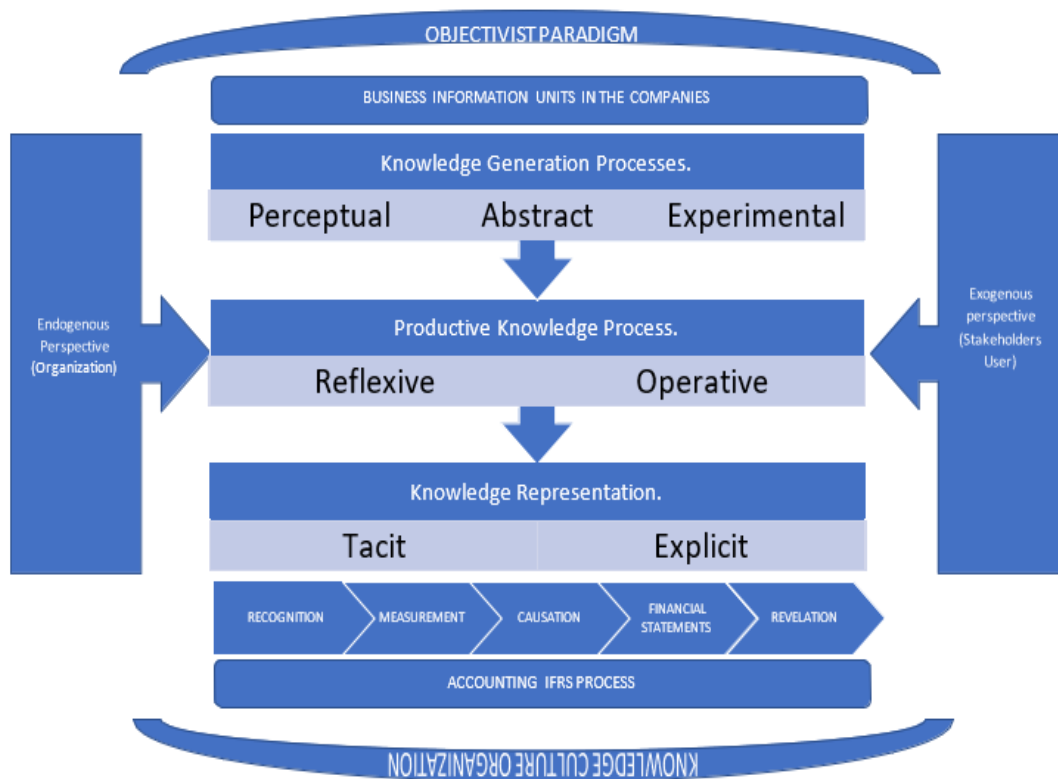


Illustration 1 Configuration of the Methodology for the Accounting Recognition of Knowledge Management

Source: Authors' Own Preparation

Conclusions

Colombian SMEs are fundamental in the country's business fabric, because they represent 8% of the entities established in the national territory, with extensive capabilities to articulate their commercial activities with micro and large companies, which allows them to be the main ally of other groups of companies. Also, they promote employment, investment and generate a good volume of annual sales. However, in the country according to the GEM Colombia 2020 report, this set of organizations has a high possibility of not prospering within the first 48 months of the start of their operations. In addition to this, SMEs are considered family businesses just like micro businesses; whereby; Many Colombian households derive their livelihood from the commercial activities they carry out. This same panorama occurs in SMEs in Latin America and the world in general, thus being the Methodology for the accounting recognition of knowledge management an opportunity for its application over time and demonstrating how, from financial accounting as an anthropological instrument, it can be demonstrate the wealth of nations through the accounting recognition of formalized knowledge.

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