Organisational Knowledge, Intangible Resources And Business Performance

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ABSTRACT:

Organisational knowledge, the sole source of sustainable competitive advantage, is embodied in companies as intellectual capital, that is, the set of intangibles based on knowledge. And special mention should be made of core competencies as they are the basis of competitive advantage and, therefore, the fundamental source of business value. This paper seeks to test the existence of positive links between core competencies –grouped according to the dimensions of intellectual capital (Human Capital, Structural Capital and Relational Capital)– and business performance. A survey was conducted among a representative sample of business managers in the Basque Country (Spain). With this information, and business performance data for 2007 and 2008 obtained from the SABI database, non-parametric contrasts were performed. The results show a positive and significant link of the ROA with the competencies linked to Human Capital in 2007 and 2008, and equally for 2008 with the competencies linked to Relational Capital.

Keywords: *Organisational knowledge, Intangible resources, Intellectual capital, Core competencies*

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1. Introduction

The growing concern regarding the management of intangible resources is undeniable. They have always been present in organisations, but the interest in them is relatively new and recent. Yet knowledge is a critical element in today's society. It has led to substantial changes in the way of understanding corporate reality. The value of human knowledge is currently much more important: know-how, training employees, intellectual property, retaining customers and knowledge about market behaviour are some examples of intangible resources that make the company generate more value.

Likewise, research into business themes have taken an important turn towards the study of intangibles and their impact on obtaining sustained competitive advantages, as even thought it has been acknowledged for some time that economic prosperity hinges on knowledge and its useful application (Teece, 1998), the emphasis on its management is relatively new.

Marshall (1890) already recognised the importance of knowledge as a significant resource and a powerful production factor. Therefore, this paper seeks to compare the existence of positive links between the three dimensions of the intellectual capital: Human Capital, Structural Capital and Relational Capital– and business performance. A survey was therefore conducted among company managers of the Basque Country, where they were asked about these aspects. Using this information and the data on the economic-financial results of the

companies, obtained from the SABI database, non-parametric contrasts were used in order to verify the aforementioned relations.

The paper is structured as follows. The second section justifies the key role of intangible resources in business competitiveness, from the resource-based view, to then show their link with intellectual capital and core competencies. The third section first describes the study methodology: the hypotheses considered to be tested, the selection of the population and obtaining the sample, and the research process used, before then setting out the results obtained. Finally, the fourth section presents the conclusions obtained, the limitations of the study and future lines of research.

2. Intangible Resources As Competitive Strategic Factors

2.1. Knowledge And Intangible Resources In Today's Society

The companies currently show a greater innovative dynamism. It was the impact of technological changes –telecommunications, information technologies, etc.–, together with the structural changes of productivity since the 1990s that would boost a period of expansion, which has subsequently been called the "knowledge era".

We can therefore see that the differentiating characteristic of the "New Economy" companies is above all their foundation on knowledge. In fact, organisational knowledge is currently considered to be the only source of sustainable competitive advantage for any type of companies. In the words of Fontela & Guzmán (2003: 13), "we are entering into a knowledge, innovative and highly productive society, where knowledge is established as the main source of wealth. To the traditional accumulation of tangible capital, infrastructure, factories and production facilities, now is necessary to add the accumulation of human capital and technological capital as a factor that is complementary to and inseparable from growth". Economic growth and competitive advantages no longer come from the availability of raw materials or physical capital, but their source is rather know-how and ideas (Drucker, 1993; Bradley, 1997; Bounfour & Edvinsson, 2005).

Consequently, those business resources based on knowledge to a great extent, namely, the *intangible resources,* have become decisive in companies (Cañibano et al, 2004). Precisely, the knowledge intangibles, which are also called intellectual capital, are those that enable companies to be different, to be better, and, therefore, construct sustainable competitive advantages over time. These aspects are developed in the following sub-sections.

2.2. Intangible Resources And Competitive Advantage

The Resource-Based View has been a decisive contribution to strategic management; however, other authors noted that companies have or control a wide range of resources and combinations of them (*capabilities*) that are essential for them to operate. These resources have different levels of efficiency, with some being higher than others. Therefore, companies with superior resources will be more likely to obtain better economic results, provided that the cost of acquiring them is lower to the value obtained as a result of the competitive advantage generated by them (Barney, 1986, 2001). This is the origin of the Resource-Based View.

A broad and quite comprehensive definition is provided by Amit & Schoemaker (1993: 36), which define these "superior resources" as "the set of resources and capabilities that are hard to negotiate and imitate, scarce, appropriable and specialised, that provide the company with

a competitive advantage", a definition that includes the five necessary characteristics for the resources to be considered strategic factors. These t five characteristics are: inimitable, scarce, valuable, non-substitutable and non-transferable. We can also add durability over time to these characteristics.

Thus, intangible resources are those resources that, as they do not have a physical or financial base, and as they are constructed by the company in time, more easily meet the aforementioned requisites, and therefore more frequently become basic factors of business competitiveness (Lev, 2001). This statement is particularly applicable to knowledge-based intangible resources, that is, *intellectual capital*.

2.3. Intellectual Capital And Core Competences.

Companies have expressed growing interest in the subject of intellectual capital (IC) in recent years, although there is not full agreement about the most appropriate definition. An interesting definition was put forward by Euroforum (1998:15): "set of assets of a company which, despite not being reflected on traditional financial statements, generate or will generate value for the company in the future"; however, there are some aspects of intellectual capital (patents, licences, R&D expenditure, etc.) that can be included on the financial statements. According Stewart (1997:2), in a simple way, IC is "intellectual material –knowledge, information, intellectual property, experience– that can be used to create wealth". The different models to measure IC put forward different ways of classification and also differentiate from each other in the terminology used. Despite this, there is certain consensus regarding three core components or dimensions: Human Capital, Structural Capital and Relational Capital (Stewart, 1997; Sullivan, 1999; Brennan & Cornell, 2000; Petty and Guthrie, 2000; Roos et al*,* 2001; Bontis, 2002; Ordóñez de Pablos, 2002; Bueno, 2003; Kauffman & Schneider, 2004; Marr & Roos, 2005).

With respect to Human Capital (HC), the rapid progress in technologies that occurs daily means that those workers with more knowledge, more skills to carry out the work and with more talent are increasingly more necessary. Global companies require different workers, with competencies, skills and mental agility, which enable them to think systematically and within a technological setting (Bontis, 2002). Therefore, this dimension is one of the most important for the organisation, and even the most important according to many authors (Marr & Roos, 2005). The second dimension with IC is known as Structural Capital (SC), which can be defined as the knowledge that the company internalises either in its structure, in its processes or in its culture, and remains there, even if its employees leave it (Bontis et al, 2000; Camisón et al, 2000). SC can be considered to cover from company culture or internal processes to information systems or databases (Bontis et al, 2000).

The Relational Capital (RC) dimension is also very important: there is a widespread emphasis on the importance of the influence of external relations on the IC models (Roos & Roos, 1997). RC must include all the relations with the external stakeholders, as the firms are not isolated systems, but rather that they are closely linked with the setting. These three dimensions are not watertight compartments, but rather they are interrelated. Therefore, any business strategy that seeks to develop the IC must take into account the existing relationships between their different components (Ordóñez de Pablos, 2002).

Apart from the IC dimensions analysed above, another differentiation in the intangible resources that we believe to be very useful is between *intangible assets* and *core competencies* (Eustace, 2001; Mouritsen, 2003; Schunder & Markom, 2004).

The *core competencies* are the set of skills or aptitudes developed by the company that generate a significant value or benefit for the client (Prahalad & Hamel, 1990). Therefore, they are the sources of knowledge and activities that, by providing competitive advantage, are the determining ones when it comes to create value. The core competencies of a company are not usually very numerous, as, in order to achieve their competitive advantage, the majority of the companies focus their endeavours and internal resources on a few sources of knowledge, services or activities (*core business*). These competencies, particularly those that are not linked to a specific activity, but rather to a set, generally indefinite, of intangible resources, may be associated to the different IC dimensions (Rodríguez et al, 2007, 2009). Therefore, we put forward core competencies linked with to HC, or to SC or to RC (The link between core competencies and IC dimensions goes on double sense: on the one hand, the competencies contribute to IC generation; on the other hand, IC can generate new basic competencies). This link can be observed in the definition of IC formulated by Bueno (1998: 221): "set of different intangible core competencies that enables competitive advantage to be created and sustained".

Core competencies are the most valid resources of the companies, the holding of said competencies must be expressed in the company results. Thus, we could ask: Does holding a core competency associated to a specific type of IC provide the company with better results? We will try to answer these questions in the following sections.

3. Intangible Resources And Business Performance

3.1. Methodology

3.1.1. Hypotheses

Core competencies linked to Human Capital

For some time now, HC has been considered as a critical resource in the majority of companies and is a source of competitive advantage (Fernández et al*,* 1998). Recent studies show that attributes such as education, experience and skills of the employees, among other, lead to better business performance (Hitt et al*,* 2001). Furthermore, HC is difficult to replace, as there are no two people with the same characteristics; people have tacit knowledge that is difficult to imitate and is acquired in situ; therefore, this type of capital can only be developed internally (Lepak & Snell, 1999). Prior studies such as the one by Rodríguez et al, 2006 show that, in general, HC is linked to improve economic results, but not directly, even though it does increase the SC and the RC, which do directly contributed to generating business value.

Other studies uphold that better business performance attributable to HC is sustainable in time, due to the complex and intangible nature of that capital (Huselid, 1995 and Koch & McGarth, 1996). This leads us to conclude that holding a core competency (competitiveness factor) linked to HC can lead to better results.

HC is related to the efficient management of costs, an innovative organisational culture and the capability to adapt; on the other hand, it is related to customer loyalty, the image or reputation of the company and its products. Therefore, when we consider a strategic competitiveness factor associated to HC and the possible relation that it may have with the business performance, we must consider the variables that more directly affect the operating

result of the company; complementarily, it can also be seen in greater growth of sales and profits.

Therefore, the following hypothesis is advanced:

> *H_1: The key competitiveness factors linked to Human Capital are associated to better business performance.*

The secondary hypotheses will therefore be:

> $H_{1.1}$: The companies whose executives consider that their most relevant competitiveness factor is associated to Human Capital have greater economic profitability (ROA).
>
> $H_{1.2}$: The companies whose executives consider that their most relevant competitiveness factor is associated to Human Capital have greater growth in sales.

Core competencies linked to Structural Capital

Many authors insist that an efficient and effective SC is needed to get the most out of HC. According to Bontis (1998), HC only generate competitive advantage if it transforms into SC. The latter refers to the intangibles that make up the work method in the organization. It is valid insofar that it enables the companies to do things for its employees, customers, suppliers and other stakeholders. Previous studies (Hall, 1993; Rodríguez et al, 2006) show that the intangibles making up SC are the most important in the organisations. The greater preoccupation to maintain and improve SC generates increases in the economic value of the company. Thus, as the idiosyncratic nature of the SC increases, companies have incentives to invest resources to manage it, in order to reduce risks and use its productive potential, and thus improve its results.

Therefore, the following hypothesis is advanced:

> *H_2: The key competitiveness factors linked to Structural Capital are positively associated to better business performance.*

And, consequently, the secondary hypotheses are:

> $H_{2.1}$: The companies whose executives consider that their most relevant competitiveness factor is associated to Structural Capital have greater economic profitability (ROA).
>
> $H_{2.2}$: The companies whose executives consider that their most relevant competitiveness factor is associated to Structural Capital have greater growth in sales.

Core competencies linked to Relational Capital

The relations with the different stakeholders around the company –particularly the customers, but also the suppliers, the competitors, the social stakeholders, etc– require good knowledge of them. This interest in knowledge about the stakeholders with which they maintain relations increases the likelihood of outdoing the competition and therefore the

likelihood of generating greater value in the company, which leads to an increase in its economic results (Kandampully, 2002).

It must be assumed the existence of a network of links among resources, individuals and activities where each individual relation is a substructure that is influenced by and influences the remaining relations (Anderson et al, 1994).

Therefore, the company needs a wide range of links with other organisations and stakeholders that enables it to be competitive on the market and obtain better results.

Based on the above, the following main hypothesis is advanced:

> *H_3: The key competitiveness factors linked to Relational Capital are positively associated to better business performance.*

And as secondary hypotheses:

> $H_{3.1}$: The companies whose executives consider that their most relevant competitiveness factor is associated to Relational Capital have greater economic profitability (ROA).
>
> $H_{3.2}$: The companies whose executives consider that their most relevant competitiveness factor is associated to Relational Capital have greater growth in sales.

The main hypotheses advanced are graphically displayed in Figure 1.

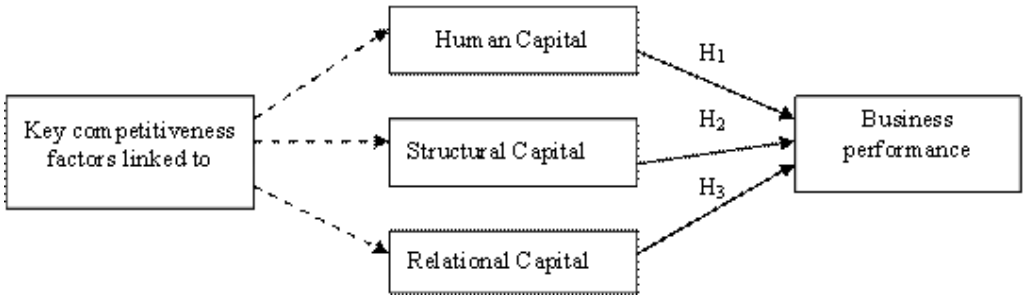

Figure 1: Main Hypotheses

3.1.2. Selecting The Population And Obtaining The Sample.

An empirical study was performed to check these hypotheses, with the results of survey to company managers combined with information on business performance obtained from a database.

The survey focused on companies in the Basque Country (Spain), specifically on those with over ten employees and whose turnover was also over two million euros a year. Companies that did not meet these conditions were ruled out as they did not have a minimum structure

and, on the other hand, there are often not sufficient financial data to be able to carry out the analysis.

The initial population, 3,263 companies, was obtained from the SABI database. From there, a representative random sample of 517 companies was obtained, whose managers answered the questionnaire by means of a telephone survey.

Subsequently, the financial-economic data of the companies were extracted from the SABI database; due to the lack of information for certain surveyed companies in the analysed period, along with the disappearance of any of them, the sample was reduced, down to a total of 300 companies for 2007 and 219 for 2008. These samples have a maximum error level of 5.4% and 6.4% for a confidence level of 95%, respectively.

Table 1 contains the technical datasheet of the conducted survey.

Table 1: Study Technical Data

Population	3,263 companies in the Basque Country
Sample	517 valid questionnaires to directives
Technique for data collection	Telephone survey
Calendar	20 November 2007 to 14 January 2008
Source of economic-financial data	SABI Database
Calendar	November 2009
Final sample	300 in 2007; 219 in 2008
Random final error	Random error of ±5.4% in 2007 and ±6.4% in 2008, with a level of confidence 95%, p = q = .5

3.1.3. Research Process

In order to verify the hypotheses, the research process was organised as follows:

First of all, the answers to a telephone survey conducted on the dates from 20 November 2007 to 14 January 2008 were collected, where the opinion of Basque executives were gathered about different aspects relating to the importance of intangibles and their financial valuation, the degree of knowledge that they held about them and the reasons that pushed them to carry out that assessment. The questionnaire was prepared as follows: the research team produced an initial version, which was subject to a pretest with the members of the Management and Finance Forum (The Management and Finance Forum - Foro de Gestión y Finanzas - is an association integrated by financial directives of the main companies of the Basque Country), following which the final questionnaire was prepared. Prior to conducting the survey, an introductory letter was sent to 1,500 companies, to which the questionnaire was attached. 517 people were surveyed, as has been previously stated. The answers of interest for the purposes of this study refer to the importance of the intangible resources and the degree of knowledge about them, particularly one question where the directives were asked to identify the key competitive factor of their company, through a list or explaining a different one. The factors indicated in the answers to this question were linked by the research team to the three dimensions of the intellectual capital: HC, SC and RC.

Next, after collecting the opinion of the executives, information was gathered about the business performance of the companies analysed in 2007 and 2008. This information came from their financial statements according to the SABI database.

Subsequently, in order to analyse the relations between the core competencies linked to the different dimensions of IC and the business performance, the data obtained were initially subject to a descriptive analysis. Secondly, in order to verify the hypotheses, given that the variables did not match normal distribution, and that the standard transformations to achieve normality were not successful, non-parametric tests, particularly the Mann and Whitney test, were performed.

3.2. Results

The results of the analysis are set out in the following subsections.

3.2.1. Key Competitiveness Factors Linked To Human Capital

With respect to the key factors of competitiveness (core competencies) relating to HC, the results for 2007 are shown in tables 4 and 5 They are shown how the average values of the economic profitability (ROA) and the increase in turnover are higher in those companies that consider the key competitive factor associated to HC. However, only the difference in the ROA variable is statistically significant to 5%, according to the Mann-Whitney test, it is not significant in the other cases. Therefore, the secondary $H_{1.1}$ hypothesis is accepted.

TABLE 2: Key Competitiveness Factors Linked To Human Capital; 2007 Descriptive Statistics

	N	Mean	Standard deviation
Key competitiveness factor linked to Human Capital			
ROA	116	.1002	.1169
Growth in turnover	115	.2620	.8161
Key competitiveness factor not linked to Human Capital			
ROA	183	.0798	.0758
Growth in turnover	180	.2035	1.0142

Table 3: Key Competitiveness Factors Linked To Human Capital; 2007 Contrast Statistics

	ROA	Growth in turnover
Mann-Whitney's U	9,082.000	9,682.000
Wilcoxon's W	25,918.000	25,972.000
Z	–2.103	–.935
Asymptotic significance (bilateral)	.035	.350
Grouping variable: Key competitiveness factor linked to Human Capital		

The companies that have a large amount of HC are able to have more skilled individuals in the production; the company is capable of operating with sophisticated mechanisms and that can generate new ideas and new methods in the economic activity. These new ideas and knowledge will be capable of generating more opportunities so that the companies work more efficiently and that is reflected in the return obtained.

Moving on to the results for 2008, the year in which the downturn occurred, reflected in Tables 6 and 7, it can be seen that the average values of the ROA and the increase in profits

for that year are higher in those companies that consider the strategic competitive factor associated to Human Capital, but only the ROA variable is statistically significant at 5%.

If then compared with the 2007 results, we can see that the greater ROA is maintained, and also significantly, for the companies whose core competencies are linked to HC. Therefore $H_{1.1}$ is also accepted for this period. Taking into account that in a previous study, referring to the 2004-2006 time period, the results are similar, the higher profitability of the companies.

Table 4: Key Competitiveness Factors Linked To Human Capital; 2008 Descriptive Statistics

	N	Mean	Standard deviation
Key competitiveness factor linked to Human Capital			
ROA	63	.0990	.0684
Growth in turnover	63	.0386	.2818
Key competitiveness factor not linked to Human Capital			
ROA	155	.0782	.0842
Growth in turnover	155	.2323	.9778

Table 5: Key Competitiveness Factors Linked To Human Capital; 2008 Contrast Statistics

	ROA	Growth in turnover
Mann-Whitney's U	3,564.000	4,453.500
Wilcoxon's W	15,654.000	6,469.500
Z	–3.123	–1.016
Asymptotic significance (bilateral)	.002	.310
Grouping variable: Key competitiveness factor linked to Human Capital		

With respect to the, not significant, greater increase in profits that companies whose core competency is linked to HC posted in that year, it may be indicative that, at a time of crisis, the companies that have previously invested in HC are in better conditions to maintain, and even increase, its profits, than other type of companies, despite the lower sales. Nonetheless, it will need to be checked in subsequent years whether that noted trend is significantly consolidated.

3.2.2. Key Competitiveness Factors Linked To Structural Capital

With regard to the second hypothesis, Table 8 shows that in 2007 the average of the variables considered is not greater in those companies that declare a strategic competitive factor linked to SC with respect to other companies. Consequently, we cannot accept any of the secondary H_2 hypotheses and therefore not H_2.

Table 6: Key Competitiveness Factors Linked To Structural Capital; 2007 Descriptive Statistics

	N	Mean	Standard deviation
Key competitiveness factor linked to Structural Capital			
ROA	39	.0855	.0737
Growth in turnover	37	.0707	.2297
Key competitiveness factor not linked to Structural Capital			
ROA	260	.0880	.0971
Growth in turnover	258	.2486	1.0007

Table 7: Key Competitiveness Factors Linked To Structural Capital; 2007 Contrast Statistics

	ROA	Growth in turnover
Mann-Whitney's U	4,939.000	4,175.000
Wilcoxon's W	38,869.000	4,878.000
Z	–.260	–1.232
Asymptotic significance (bilateral)	.795	.218
Grouping variable: Key competitiveness factor linked to Structural Capital		

With respect to the 2008 results, we find in Table 10 that, similarly to what happened in 2007, the average of the variables considered is not higher in companies that consider the key factor of competitiveness linked to SC, and the results are not statistically significant. Therefore, we cannot accept H_2.

Table 8: Key Competitiveness Factors Linked To Structural Capital 2008 Descriptive Statistics

	N	Mean	Standard deviation
Key competitiveness factor linked to Structural Capital			
ROA	36	.0672	.0555
Growth in turnover	36	.1352	.4122
Key competitiveness factor not linked to Structural Capital			
ROA	182	.0876	.0841
Growth in turnover	182	.1845	.9037

Table 9: Key Competitive Factors Linked To Structural Capital; 2008 Contrast Statistics

	ROA	Growth in turnover
Mann-Whitney's U	2,718.000	3,053.500
Wilcoxon's W	3,384.000	19,706.500
Z	–1.614	–.643
Asymptotic significance (bilateral)	.107	.520
Grouping variable: Key competitiveness factor linked to Structural Capital		

Therefore, we believe that it cannot be deduced from the above that the core competencies associated to SC are not important in the organisations. There is general agreement that the competitive advantage of a company is ultimately due to an appropriate combination between the different IC dimensions and they are therefore all important.

A possible additional explanation for those results is that the executives that declared a key competitive factor linked to Structural Capital only expressed intentions or opinions, but their companies really did not implement it by means of appropriate management.

3.2.2. Key Competitiveness Factors Linked To Relational Capital

As far as H_3 hypothesis is concerned, Tables 12 and 13 show that average growth in 2007 in terms of sales and profits is greater in those companies that consider a key competitive factor associated to RC. Despite this, none of the variables were statistically significant at 5%, according to the Mann-Whitney test.

Table 10: Key Competitiveness Factors Linked To Relational Capital; 2007 Descriptive Statistics

	N	Mean	Standard deviation
Key competitiveness factor linked to Relational Capital			
ROA	107	.0844	.0849
Growth in turnover	106	.2795	1.2860
Key competitiveness factor not linked to Relational Capital			
ROA	192	.0896	.0992
Growth in turnover	189	.1964	.6770

Table 11: Key Competitiveness Factors Linked To Relational Capital; 2007 Contrast Statistics

	ROA	Growth in turnover
Mann-Whitney's U	9,376.500	9,587.500
Wilcoxon's W	15,154.500	27,542.500
Z	–1.250	–.611
Asymptotic significance (bilateral)	.211	.541
Grouping variable: Key competitiveness factor linked to Relational Capital		

With regard to the 2008 results, the average of the ROA variable is greater in those companies that consider their key competitiveness factors associated to RC, while the sales growth and operating profit growth variables did not perform as expected, as can be seen in Table 14. On the other hand, given the contrast statistics (Table 15), the hypothesis $H_{3.1}$ is confirmed.

Table 12: Key Competitiveness Factors Linked To Relational Capital; 2008 Descriptive Statistics

	N	Mean	Standard deviation
Key competitiveness factor linked to Relational Capital			
ROA	89	.0861	.1000
Growth in turnover	89	.1145	.5130
Key competitiveness factor not linked to Relational Capital			
ROA	129	.0814	.0636
Growth in turnover	129	.2190	1.0082

Table 13: Key Competitiveness Factors Linked To Relational Capital; 2008 Contrast Statistics

	ROA	Growth in turnover
Mann-Whitney's U	4,852.500	5,607.500
Wilcoxon's W	8,857.500	13,992.500
Z	–1.940	–.291
Asymptotic significance (bilateral)	.052	.771
Grouping variable: Key competitiveness factor linked to Relational Capital		

Figure 2 graphically shows the accepted hypotheses.

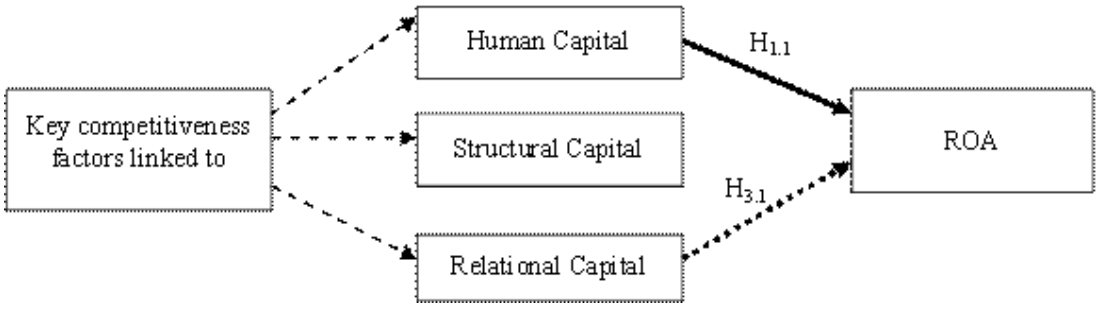

Figure 2: Accepted Hypotheses

(Continuous arrow: hypothesis accepted in 2007 and 2008. Broken line arrow: hypothesis accepted only in 2008)

4. Conclusions

This paper seeks to identify the positive links between key competitive factors as core competencies associated to the different dimensions of intellectual capital, and the business performance.

However, the results obtained were not as overwhelming as could have been expected. In fact, according to the analysis performed, the only variable that leads to significant improvements in the results is the economic profitability (ROA).

In the case of the companies with core competencies associated to Human Capital, the higher ROA is significant in each of the years in question (2007 and 2008). Nonetheless, this seems to contradict other studies, where a direct link between Human Capital and business performance is not usually found, but rather through its effect on the other dimensions of intellectual capital. This disparity may be due to the indirect links between Human Capital and the business performance found in other studies may also occur in the population analysed here, although, in the way that our study has been planned –a unique key competitive factor for each company, linked to a single intellectual capital dimension–, are not detectable.

The companies whose executives consider the key competitiveness factor linked to Structural Capital does not obtain better results *a priori*. This seems to contradict prior

findings, according to which the other types of intellectual capital only generates competitive advantage if they are transformed into Structural Capital. The results are therefore not perhaps reflecting the true role of structural capital in the analysed companies, as the competitive advantage is ultimately due to an appropriate combination between the different dimensions of the intellectual capital, and the importance of SC is widespread in other types of IC.

With respect to the core competencies associated to Relational Capital, they were only significantly reflected in a better ROA in 2008.. In a year when the downturn had already started, such as 2008, when only the best prepared companies survive and are profitable, the greater endowment of intangibles, rational in this case, leads to greater profitability.

We believe that these conclusions are particularly relevant, as, as has already been indicated, this study has been based on a representative sample of companies –any type of companies from all sectors–, while the majority of previous studies have focused on specific sectors or technological or innovative companies.

Nonetheless, this work has various limitations: the first refers to the geographical area considered; the second is that, given the approach of the study, relations are not considered that may exist, in the same organisation, between competencies linked to different types of intellectual capital, as only the core competencies that the executives perceive as the most important in their company are taken into account.

In this respect, a future study would be to compare the relations raised with subsequent data, taking into account that a period of deep economic crisis are thus included, in order to consider to what degree the results of the companies with greater interest in their intangibles have perhaps been able to weather the storm better than others that were not so concerned with their management.

Finally, an approach where the executives are asked about more than one core competency, and a measure of its relative importance in the organisation, would enable the link to be established between the different core competencies and with the business performance.

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