

Human Capital as Source for Sustained Competitive Advantages in SMEs: A Core Competencies Approach

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ABSTRACT

Human capital is a source of competitive advantage, since it helps to build core competencies which position the company above its competitors. Core competencies are dynamic competencies of superior hierarchy, which integrate, build and reconfigure internal and external factors of business to create value. Core competencies are competitive advantages when an organization gets better performance than competitors. Human capital is source of competitive advantage but it possibly does not directly affect to performance. It needs to associate with other elements in core competencies. These associations are not well known. That is the goal of this paper: to determine how human capital affects the organizational performance through core competencies. We argue that human capital needs other intellectual capital-based elements to constitute core competencies which finally improve and yields above average performance.

KEYWORDS: *Sustained Competitive Advantage, human capital; intellectual capital; SMEs, core competencies.*

JEL CLASSIFICATION: *L21, L25, M21*

INTRODUCTION

Literature on human resources usually accepts that human capital (HC) is a source of competitive advantage in large enterprises (Clarke et al., 2011) and small and medium enterprises (SMEs) (González-Loureiro & Pita-Castelo, 2012). This stems from the fact that the improvement of the HC has an impact on performance that it is not simple neither easy to evaluate and hence to imitate (Bontis et al., 2000; Tovstiga & Tulugurova, 2009; Clarke et al., 2011).

HC is different when compared SMEs and large enterprises, mainly because of the constrains affecting smaller organizations (Hayton, 2003). Perhaps, it is more important as a source of competitive advantage for SMEs than for large companies because HC is specific and SMEs can use it to differentiate from competitors. Several authors suggest that the impact of HC on performance it is not direct (Hayton, 2003; Jin et al., 2010; Unger et al., 2011). Therefore, there must be a hidden mediator between HC and performance. Unger et al. (2011) suggest that HC must be applied to specific tasks required by an organization; Boselie, Dietz, & Boon (2005) suggest that the impact of human resources management (HRM) on internal performance indicators is what generates better financial performance;

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Jin et al. (2010) suggest that HC should be applied to the industry success factors in order to generate better performance and Lahiri, Kedia, & Mukherjee (2012) use managerial capability as a mediator between intangible resources and performance. HRM create sustainable competitive advantages when combined with effective recruitment and compensation policies (Lam & White, 1998).

Grant (2005) suggests that HC (as a resource) generates organizational capabilities that organize competitive advantages of the organization. A first step is managing human capital but SMEs have a greater simplicity in their system of organization than large organizations, so that the former may not have enough resources as to organize their strategic HC management (HCM) efficiently. Hayton (2003) suggests that is not evidence that HCM alone is sufficient to enhance entrepreneurial performance. This result suggests the possibility that other elements of intellectual capital are required to actually manifest the HC as a source of a sustained competitive advantage (SCA). Three dimensions of intellectual capital are usually considered: HC, structural capital and relational capital. HC lies on people, structural capital lies inside the organization, and relational capital lies on the relations between organization and its environment (Sveiby, 2001). Intellectual capital is manifested from inner to outer in concentric circles, from HC to structural and relational capital. HC needs either structural capital to support their actions or needs the relational capital to manifest its potential, beside organizational capabilities.

We suggest that HC affects performance when it is combined with others elements to constitute core competencies. Core competencies are competencies integrating, building and reconfiguring resources packages, capabilities (Teece et al., 1997) and environment to generate value for the organization (Priem & Butler, 2001). These core competencies are actually improving performance in organizations. Focusing on the people-related elements of a core competency provides a linking pin between strategy and HR realms (Wright et al., 2001).

Our article provides three important contributions. First, the study indicates the process through which HC improves the organization's performance. Second, it shows how difficult is to obtain performance directly from HCM in the case of SMEs. Finally, it specifies which SMEs' elements should be combined with HC for building competitive advantages.

1. THEORETICAL BACKGROUND AND FRAMEWORK

A characteristic of an organization is a source of competitive advantages if it is able to answer four questions, related with Value, Rareness, Inimitability, and Non-substitutability (VRIN) (Barney, 1991; Wright et al., 2001). Organizations create value through either decreasing product/service costs or differentiating the product/service in a way that allows charging a premium price (Barney & Wright, 1998).

HC is the sum of the knowledge, skills, abilities (KSA) and other characteristics of individuals (Ployhart & Moliterno, 2011) belonging to the firm (Becker, 1964). HC is unique because people cannot be separated from their knowledge, skills, or values in the way they can be separated from their financial and physical assets.

SMEs have specific characteristics in comparison to large enterprises. Hutchinson & Quintas (2008) highlight the relevant differences between large and SMEs, particularly regarding the latter limited internal resources constraining their management of external and internal sources of intangible-based competitive advantages. Bearing in mind the particular characteristics of SMEs, it calls for further investigation on the mediator elements and on the mechanisms which can explain theoretically the empirical results. Over the next sections, we present the rationale of our propositions under the umbrella of the SCA discourse, and the VRIN principle.

1.1. Human capital as competitive advantage

High skilled people are able to perform more efficiently their job and consequently they can reduce their unitary cost. Capabilities and, particularly, creativity of workers is a consequence of HC and yields more valuable products or services. Schneider & Bowen (1985) suggested that employee attitudes would be consequently related to customer satisfaction. The value of a customer service depends on the employees' ability to relate. HC can positively influence the organization's performance by enabling it to comprehend the complexities of various transferred business processes and execute the processes satisfactorily by adhering to quality, security and timelines aspects (Budhwar, Luthar, & Bhatnagar, 2006). Thus, empirical research supports the notions that employees' satisfaction is linked to service quality, and HC is important factor to determine employees' satisfaction (Barney & Wright, 1998). The skills and knowledge of the workforce increase the organization's productivity, which makes HC a valuable resource (Jin et al., 2010).

Rareness and inimitability is consequence of specificity of HC. Skills and knowledge of human resource need time to develop and should be updated constantly, which is costly and not possible for all organizations, making HC a rare resource; the tacit knowledge developed by social interaction in the organization makes HC an imperfectly imitable resource (Jin et al., 2010).

Human resources can easily move between organizations, therefore it should be difficult to protect HC from expropriation by rivals. Risk of expropriation is greater with codified knowledge because can be articulated, while tacit knowledge cannot be articulated and is isolated from rivals because it is embedded in the organization's routines, human skills, and relationships (Liebeskind, 1996). Codified knowledge typically sustains competitive advantage only to the degree that organizations are successful in protecting it. Tacit knowledge may be so well protected from imitation that it is difficult to diffuse even within the organization where it originates (Hatch & Dyer, 2004). SMEs have relatively more tacit knowledge so it may be more useful as a competitive advantage.

The portion of organization-specific HC that is tacit knowledge is particularly inimitable (Liebeskind, 1996). In the process of learning within an organization, HC becomes more organization-specific. Being tacit and path dependent HC is not susceptible to easy imitation by industry rivals (Lahiri et al., 2012). The ability of human resources to learn is enhanced by their HC investments in experience and problem- solving (Hitt et al., 2001).

Knowledge is helpful for acquiring other utilitarian resources such as financial and physical capital (Brush et al., 2001) and can partially compensate a lack of financial capital which is a constraint for SMEs (Fazzari & Mosca, 2009). Finally, HC is a prerequisite for further

learning and assists in the accumulation of new knowledge and skills (Unger et al., 2011). HC is most valuable and most inimitable when it is organization-specific and resides in the environment where it was originally (optimally) developed (Hitt et al., 2001). Context and specificity use of HC strengthen their inimitability. The flexibility of SMEs facilitates to achieve more specificity and, in consequence, SMEs can use HC as strategic resource.

Finally, in order for any characteristic of an organization's HC to provide a source of SCA, the organization must be organized to exploit the resource. Organization requires having in place the systems and practices that allow HC to bear the fruit of their potential advantages (Barney & Wright, 1998). This organization is consequence of organizational capabilities. HC need to be organized in processes to obtain better performance. Organizational capabilities are necessary to constitute core competencies, which can improve organization performance. HC organized through core competences affects performance. HC is a resource, thus it is difficult that HC directly improves performance.

Proposition 1 Human capital does not sufficient to improve significantly the SMEs' performance.

1.2. Human capital management and human capital

While HC checks the characteristics required of a source of competitive advantage, it is unclear whether the impact is direct or it must be combined with other factors to generate better performance. For example, Unger et al. (2011) found a significant but small relationship between HC and success ($r=0.098$) based on 70 independent samples ($N=24,733$). There is a certain agreement on the importance of HC to achieve better business performance (Combs et al., 2006), but many authors seek to understand explanations of the mediating mechanisms through which HC may drive performance (Wright et al., 2001).

Resources based-view (RBV) point out that competitive advantage comes from aligning skills, motives, and so forth with organizational systems, structures, and processes that achieve capabilities at the organizational level (Prahalad & Hamel, 1990; Teece et al., 1997). Too frequently, HR researchers have acted as if organizational performance derives solely from the (aggregated) actions of individuals. But the RBV suggests that strategic resources are more complex than that and more interesting.

The organization's strategy combines internal and external sources of competitive advantages to constitute core competencies (Grant, 1991; Prahalad & Hamel, 1990). Competencies, resources and capabilities are concepts often become conceptually and empirically merged (Bani-hani, 2009), as they involve a cumulative hierarchy. This paper considers resources, organizational capabilities (Grant, 1991) and core competencies (Prahalad & Hamel, 1990) as levels of that hierarchy. A resource refers to an asset or input to production (tangible or intangible) that an organization owns, controls, or has access to on a semi-permanent basis (Helfat & Peteraf, 2003). Organizational capabilities are formed by resources teams deployed for a desired end result (Helfat & Lieberman, 2002). Core competencies are formed by resources, organizational capabilities and external factors. The core competency uses constructs used in the literature, as strategic resources (Barney, 1991) or dynamic capabilities (Teece et al., 1997). Core competencies are competitive advantages when they impact on organization performance.

SMEs organize their core competencies to create value for the final client, for which they need to achieve some competitive advantage. In addition core competencies are specific combination of resources, capabilities and external factors to the organization. Consequently, they are difficult to imitate (they can hardly be separate from the context where they are deployed) and rare (in terms of uniqueness for virtually each SME). Those competencies are valuable for either the particular organization or industry. Therefore, core competencies verify key requisites of the SCA discourse.

Theorists are usually focused on the need to develop a pool of HC that has either higher levels of skills (general and/or organization specific), or achieving a better alignment between the skills represented in the organization and those required by its strategic intent. The current stock of HC can and does change over time and must be constantly monitored for matching the strategic needs of the organization (Wright et al., 2001). HCM is a strategic approach to people management, focused on knowledge, skills, abilities and capacities possessed by people in an organization in order to innovate and to compete (Baron & Armstrong, 2007). It comprises the development of all labor-related issues impacting on organization's strategic and operational objectives. It includes the utilization of people, the development of resources, and the use, maintenance, as well as compensation of those services aligned with the requirements of the job and the organization.

Organizations require dynamic capabilities to adapt effectively to the changing market conditions and create the appropriate value for each condition. These capabilities help organizations to create and modify existing operating routines, making sense and seizing entrepreneurial opportunities that in turn increase organizational effectiveness. Similarly, we contend that a higher management capability should enable a better management of suppliers i.e., bundling and leveraging various organization-level resources and capabilities through creation of valuable synergy that result in performance enhancement (Sirmon & Hitt, 2009). HCM combines HC and organizational capabilities.

Besides the leadership skills of managers improves efficiency of human resources management in SMEs (Ferligoj et al., 1997). Most competent and collaborative attitude is better suited to the company and facilitates HCM. KSAs embedded within human actors allow precise comprehension of various organizational functions and subsequent efficient execution of those functions within stipulated time-frames (Lahiri et al., 2012). Employees with a high degree of value and specialization in their KSAs are developed internally, so the involvement of these employees in decision making assures optimal utilization of employees potential (Smidts et al., 2001). HC advantage refers to the potential to capture a stock of exceptional human talent latent with productive possibilities. Consequently, we introduce our next proposition:

Proposition 2: Human capital improves directly human capital management in SMEs

1.3. Human capital management and performance

SCA is not just a function of single or isolated components, but rather a combination of HC elements such as the development of stocks of skills, strategically relevant behaviors, and supporting people management systems (Wright et al., 2001). HCM being based on HC assumes its characteristics as a source of competitive advantage, i.e., rare, inimitable, valuable and non-substitutable since it is specific to each company.

HCM improves organization performance. First, the organization of human resources for efficient work increases productivity, reducing costs; organizations with best practices of customer service realize better service, increasing value for the clients; executives' ability in managing human resources, client requirements, information systems, technology related changes, and multiple project demands may be critical for efficient and effective deployment of resources to build superior relationships with various clients (Kor, 2003). Different practices of human resource management that enhance creativity promotes innovations that can reduce the costs and increase the products value; a fair system of human resources development makes human resources feel better in the company, reducing the costs of absenteeism and turnover (Hayton, 2003); HR practices that encourage the involvement of those in the strategy of the company achieves that human resources are involved in the activity of the company, best doing their work and reducing manufacturing costs; HR practices that promote a culture of quality and continuous improvement help to reduce manufacturing costs and give more value to products; A good system of management of human resources facilitates the attraction of top HR, making the company more valuable. Inadequate human resources management not only reduces company productivity and profitability, but it may create a negative climate that will lead even the failure of the SMEs. The underlying logic is that strategic managers with tacit knowledge of employee skills and interests can more precisely assess the likelihood of success among multiple avenues of R&D investments and thus dedicate resources to high- margin projects in which the organization is more likely to achieve sustainable competitive advantage. In other words, crucial investments can be better managed when strategic managers possess organization-specific knowledge of resources and dynamic capabilities, i.e., greater level of management experience can positively moderate the relationship between R&D deployments and value creation (Kor & Mahoney, 2005). HCM in SMEs must facilitate continuous improvement of everything through enhanced horizontal and lateral relationships (Fazzari & Mosca, 2009).

In consequence it is expected that HCM has a positive impact in the competitiveness. SMEs must establish good governance and human resource management that would ensure a motivated workforce, trained and able to produce efficiently to have success because their size may not warrant bringing on professionals exclusively dedicated to human resource management activities (Hornsby & Kuratko, 2003). Recruitment, selection, allocation, and retention of human talent is critical to the success of SMEs (Zula & Chermack, 2008).

Proposition 3: Human capital management improves the SMEs' performance.

1.4. Human capital and internal intellectual capital management

Intellectual capital increases as concentric circles from internal (HC in people) to external (relational capital in environment). Structural capital is situated between other components of intellectual capital. Structural capital includes culture, technology and organizational structures. In general, the corporate culture refers to organization's values, traditions and social norms. Barney (1991) suggests that corporate culture is an enterprise resource of great strategic importance which is potentially very valuable. Technology embraces the body of knowledge, forms, methods, tools and procedures for combining the different resources and capabilities in the productive and organizational processes to ensure that are efficient. The accumulation of technological knowledge is primarily generated from a dynamic learning process. Internal intellectual capital management associates structural

capital and organizational capabilities to obtain performance (Lahiri et al., 2012). Proper management of technology improves performance of machinery, production processes, systems and even performance of human resources. It also increases the production capacity, reduces costs, and facilitates better adaptation to the needs of customers improving company's performance. Organizations that incorporate or develop technology assets will have better position than their competition.

HC leads to higher performance only if it is applied and successfully transferred to the specific tasks that need to be performed (Unger et al., 2011). These tasks are performed using tools that the company provides to implement them. Structural capital is the breeding ground where HC proves effective. That is why core competencies created from HC need structural capital.

Internal intellectual capital management is referred to core competencies that jointly manage the human and structural capital of organization. It includes the ability to harmonize efforts of employees and integrate their separate skills within a corporate culture, the stock of technology, existence of technology policy instruments in the organization, and scientific and technical development (Renuka & Venkateshwara, 2006). Thus the characteristics of internal intellectual capital management are invariably tacit and complex in nature, preventing imitation and thereby prolonging exceptional performance (McEvily & Chakravarthy, 2002). For example, managers with high management capability will match an effective utilization of knowledge embedded in databases and manuals relating to the diverse requirements of global clientele resulting in an efficient and a quicker response to clients' needs. The presence of managers with superior management capability may help organizations to better evaluate how resources, such as information technology infrastructure, organizational institutionalized knowledge, organizational culture etc., can be best utilized and dedicated for greater innovation and value creation (Sirmon, Gove, & Hitt, 2008). Previous literature has considered constructs comprising aspects of this core competency. For example, Newbert, Kirchhoff, & Walsh (2007) and Ruiz Ortega (2010) define technological competencies and Lopez-Cabrales, Valle, & Herrero (2006) use managerial capability.

HC is basic to internal intellectual capital management. A company with more HC has better prepared personnel and consequently it possibly has a better working climate (Boselie et al., 2005) making easy to integrate human and cultural issues. By utilizing employees' formal education and training, job-based knowledge, and relevant work-experience, organizations can conceptualize various contractual needs, efficiently execute and supply the transferred processes, act upon and learn from real-time feedback, and devise new and improved ways of doing business over time. Again the results indicate that this training should aim to integrate the company's internal resources to provide specific expertise to manage them properly. All these can result in enhancing quality of delivered services and rent generation over time (Budhwar et al., 2006).

KSAs arising from education and experience, and embedded within human actors allow precise comprehension of various organizational functions and subsequent efficient execution of those functions within stipulated time-frames (Lahiri et al., 2012). HC is positively associated with reinforcement of organizational culture, strategic vision, obtaining employee potential and flexible design (Lopez-Cabrales et al., 2006), aspect integrated in internal intellectual capital management.

SMEs differ with respect to large companies in the internal intellectual capital management (Renuka & Venkateshwara, 2006). SMEs have less bureaucratic complexity, increased communication between all levels of the company. Small size allows attaining a good working environment, there is greater levels of flexibility, more motivating employees and more identifying with the objectives of the company. However, small size is worse because the leadership is more personalized, decisions are more centralized, there is more discretion in the promotion and compensation of employees, worsening the climate and opportunities for professional development of workers (Hornsby & Kuratko, 2003) and is less able to retain the best professionals (Klass et al., 2002).

Proposition 4: Human capital positively affects the internal intellectual capital management in SMEs.

1.5. Internal intellectual capital management and performance

Authors suggest the importance to align HC with business to obtain competitive advantages (Bontis et al., 2000; Lopez-Cabrales et al., 2006; Zula & Chermack, 2008; Unger et al., 2011). In order to achieve greater performance, the company needs to combine HC, structural capital and organizational capabilities. Human resources need the right technology and the processes and systems that enable them to efficiently perform their tasks (Buller & McEvoy, 2012). Alternatively, the company which has appropriate processes, systems and technology must have people prepared to efficiently use them. In addition, these tasks must be organized within the company structure, embedded in the corporate culture, so that all of them are coordinated and oriented strategic purposes (Coff & Kryscynski, 2011). Increased inter-organizational trust has been shown to exert positive impact on organization performance (Liao, 2010). Partnerships based on mutual trust, joint problem solving, and fulfillment of pre-specified promises between exchange entities have been argued to foster bypassing of traditional expensive governance mechanisms (Lahiri et al., 2012). Organizational systems and processes necessary to achieve better customers' relationships. Innovations generate better business performance when they are aimed at generating value counting with technology, processes and systems of the company.

Structural capital includes the organization, culture and technology. Tacitness and idiosyncrasy of structural capital can create more value if organizations are able to manage such path-dependent resources efficiently and effectively (Lahiri et al., 2012). They are needed to more efficiently perform strategic tasks. Therefore the company needs to jointly manage HC, structural capital and organizational capabilities to achieve better performance. Each of the aspects that make up the internal intellectual capital management may improve the performance of the company, but is integrated all of them actually get the best performance. Consequently we introduce the following proposition:

Proposition 5: Internal intellectual capital management improves the SMEs' performance.

Figure 1 depicts graphically our framework for this research. We should mention that some of our propositions are alternatives what means some kind of competing propositions.

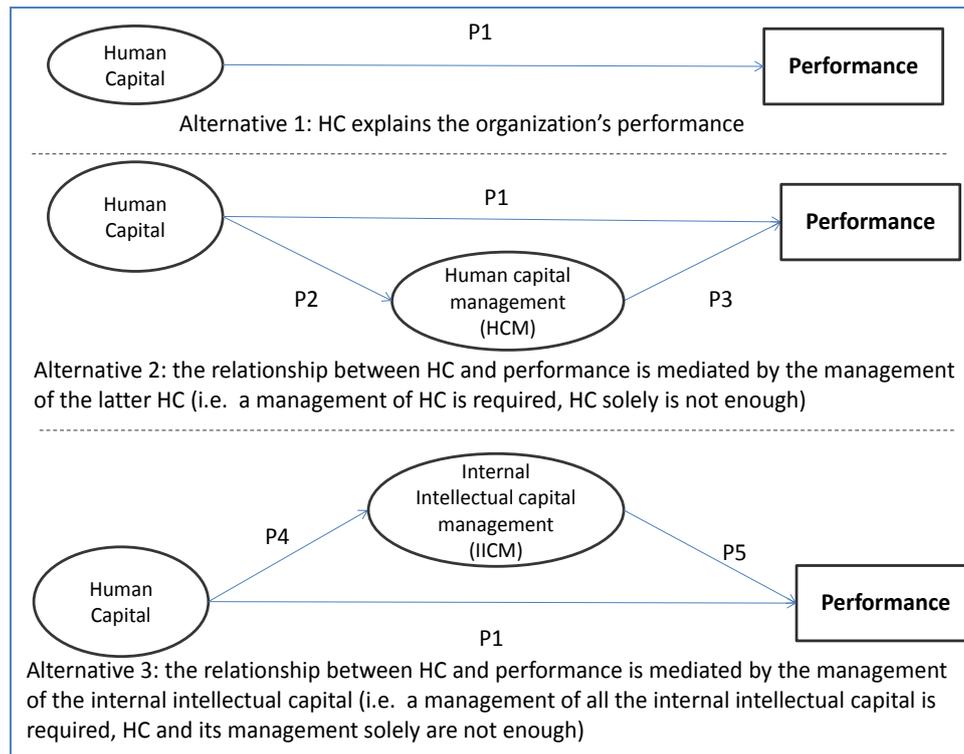


Figure 1. Framework of the research: alternatives and propositions

Source: Authors

Three alternatives are depicted. On one hand, we argue that HC does not directly affect performance (P1). If so then it implies that some mediator effects are missed on that relationship. Alternatively, HC would relate to performance through HCM. This second alternative includes propositions 2 (from HC to HCM) and 3 (from HCM to performance). On the other hand, a third alternative considers that HC would relate to performance through the internal intellectual capital management, involving propositions 4 (HC to internal intellectual capital) and 5 (from internal intellectual capital management to performance). The second alternative (HCM) is a subset of the internal intellectual capital management (the third alternative). Therefore, in the case of rejection of the former and confirmation of the latter, it would mean that HC and its management is not sufficient for achieving a SCA, as it does not help to increase performance significantly. Additionally, each one is an alternative of superior category. Therefore, our propositions range from the more simplistic (HC directly affects performance in the alternative 1), to one indirect effect of HC through HCM (alternative 2), and to the more complex alternative (the third) where HC has an indirect impact on performance and the mediator is more complex construct of core competencies.

In short, the competing models showed in figure 1 will provide evidence on the main underlying question: it is not only a question of resources or capabilities (alternatives 1 and 2), it is a question of how the organization build its core competencies in order to have a significant impact on performance (alternative 3).

2. METHODOLOGY

2.1 Population and Sample

Model was tested in SMEs of Galicia, located in the northwest of Spain. We tried to isolate the effect of context-dependency by reducing the geographical scope of the sample. The area has had a long entrepreneurial tradition. It thrived in the early twentieth century with the rise of the canning and was enhanced in the mid-1960s with the establishment of a cars' multinational in the area. These developments have meant that the activities associated with sea fisheries as well as food or shipyards and transport equipment have become increasingly important. This undergone several industrial restructuring that tested their resilience and shown great entrepreneurial spirit exists. For these reasons it appears as a good place to compare some of the theories developed on competitive advantages.

The economic structure of an area shows some of their characteristics. Consequently it is desirable to design the sample taking into account this structure. There are different alternatives. We followed an approach of corporate clusters, i.e. analyzing all activities associated with the same value chain of a product or service. We categorized organizations in 11 clusters according to SIC Code, considering the particular situation of this area (González et al., 2006). Target population was SMEs with more than 9 workers and less than 250 workers, according to the typical statistical definition of SME.

A random stratified survey was conducted in the area in 2005 to obtain empirical data. A sample of 400 companies was selected with a confidence level of 95.5% with a maximum error of 5% in the case of a dichotomous question. We randomly selected 20 companies in each cluster and the rest of the sample was randomly selected proportionally to the structure of size and number of organizations. SMEs received a copy of the survey and the project with a brief explanation on how to complete the questionnaires. The interviewers went to withdraw the survey two weeks later. Interviewers helped the entrepreneur to cover the survey if he / she needed. The response rate was 90%, so finally obtained 360 valid responses with which they conducted the study. It was found that the final structure of the sample was consistent with the study population by Homogeneity test (Newbold, Carlson, & Thorne, 2002).

2.2 Measures and Liability

The form of the questionnaire followed the pattern of González et al. (2006) based on scales from literature (Narver & Slater, 1990; Deshpande & Golhar, 1994). Entrepreneurs were asked about each item (see Table 1). They were required to indicate whether each item was considered important as competitive advantage for their company, in a scale ranging from 1 (it is not important) to 5 (it is very important).

Table 1. Competitive advantages items

Construct	Source of competitive advantages	References
Human Capital (HC)	The capacity of HC to innovate in processes, products or markets	(Verhees & Meulenber, 2004)
	The training of managers and workers	(Pfeffer, 2005)
	The professionalism and attitude of managers and workers	(Hornsby & Kuratko, 2003)

Construct	Source of competitive advantages	References
	The human resources as the foundation of the HC	(Hatch & Dyer, 2004)
	Ability of the HC to penetrate new international markets	(Camisón & Villar-López, 2010)
	Ability of the HC to evaluate investment risks	(Balakrishnan & Fox, 1993)
Human capital management (HCM)	The system for managing the HC	(Grant, 2005)
	The development of actions for fostering the professionalism of managers and workers	(Hornsby & Kuratko, 2003)
	The Management of training for managers and workers	(Pfeffer, 2005)
	The management of a system for a HC risk evaluation	(Balakrishnan & Fox, 1993)
	The process of human resources management	(Hatch & Dyer, 2004)
	The management of the Information system about HC	(Mata, Fuerst, & Barney, 1995)
	The management of the capacity to penetrate new international markets	(Verhees & Meulenber, 2004)
Internal intellectual capital management (IICM)	The system for managing the internal intellectual capital	(Grant, 2005)
	The management of the intellectual capital stemming from the training of managers and workers	(Pfeffer, 2005)
	The management of the intellectual capital stemming from the professionalism and attitudes of managers and workers	(Hornsby & Kuratko, 2003)
	The management of the Company's Culture	(Barney, 1991)
	The management of human resources as the main asset	(Hatch & Dyer, 2004)
	The management of technological resources, facilities and equipment	(Kim & Kogut, 1996)
	The overall system of information on internal resources and capacities	(Mata et al., 1995)
	The internal system of communication	(Barney, 1991)

Source: own draft from authors cited

The organization performance is associated with competitive success. Business performance indicators can be evaluated using quantitative or qualitative data. Quantitative data are more objective, since they are listed numerically and are equally considered by all observers. However these data are based on a particular accounting information system for legal and tax considerations that may distort the reality of the business. Despite the objectivity of financial indicators, they actually reflect past performance and do not necessarily point to the sustainability of success in the future. Furthermore, a study has emphasized that financial data would present serious constraints in terms of data availability (Anand et al., 2006). Therefore, in various research papers, authors opted for subjective data (Covin et al., 1990; González et al., 2006; Brenes et al., 2008). According to

this criterion, surveyed entrepreneurs were asked for assessing performance in terms of the items listed in Table 2. They should indicate whether they had decreased or increased over the last two years vs. competitors, in a scale ranging from 1 (strongly decreased) to 5 (strongly increased). Size and age are used as control variables. Size is measured by number of employees; age is the lifetime of the company.

Table 2. Performance items

Items	References
The turnover	(Bontis et al., 2000)
The cash flow	.Chakravarthy (1986)
Net profit	(Darroch, 2005)
Profitability	(Darroch, 2005; Chen et al., 2005)
Solvency	(Katchova, 2010)
Equity	(Chen et al., 2005)
The professionalism of the employees	(Rangone, 1999)
Productivity	(Valmohammadi & Servati, 2011)
The market value of the company	(Darroch, 2005)
The company's competitive position in the market	(Darroch, 2005)

Source: own draft from authors cited

2.3. Statistical Techniques

HC is a source of competitive advantage and it is possible that HC directly improves performance (H1). Otherwise, HC can impact on performance through mediators. This paper considers two mediators: HC management (H2 & H3) and internal intellectual capital management (H4 & H5).

Theoretical models include constructs to measure resources, core competencies and performance. Core competencies were selected by exploratory factorial analysis (F-Jardon & Martos, 2011). The models study linear relationships between structural variables. The research uses partial least squares (PLS) because we are working with data measured on an interval scale that are unlikely to satisfy the assumption of normality of the variables. PLS-technique is a more flexible and less constrained alternative for these assumptions. PLS-based solutions attempt to minimize the variance of all dependent variables. Least-squares procedure is partial in the sense that each step minimizes the residual variance with respect to a subset of estimated parameters, given the remaining variables approach and set the other parameters. This approach avoids problems such as identification of parameters in the covariance of the model (Chin, 1998).

This technique uses the average variance extracted (AVE) and Cronbach alpha (CA) as criteria to validate model. AVE measures the variance captured by a latent construct. Generally this amount should be greater than 0.5, but is considered as valid when is greater than 0.3, if rationale for this is sufficient. CA measures average correlations among the items referred to a single aspect, from a single administration of the questionnaire (Cronbach, 1951). Nunnally & Bernstein (1994) suggest that if CA is greater than 0.6 is right. We selected the model that shows significance on all the relations among constructs.

The distribution law of the estimates is unknown because normality of the variables that define the constructs is not required. Therefore, a bootstrapping technique is used to test whether the parameters are significant. This means to create N similar samples to that obtained with the same empirical distribution. A different PLS estimator is got from each of them. Assuming that the distribution of the average of all of them is approximately normal we could test the reliability and values (Efron, 1979).

The software used for data analysis process and exploratory analysis was the Statistical Package for the Social Sciences (SPSS 15). The software used to determine factors and impact assessment was Smart PLS (Ringle et al., 2005).

3. RESULTS OF EMPIRICAL ANALYSIS

The aim was to determine the model that better explain the process from HC to performance through core competencies. The different models were estimated using PLS techniques after selecting the items that characterize each competency (Chin, 1998). Measuring the effects consists of two parts: assessment of the constructs reliability and effects estimation. Table 3 lists model reliability.

Table 3. Reliability and internal effects

	AVE	Cronbachs Alpha
HC	0.44	0.75
HCM	0.45	0.79
HCSM	0.41	0.88
Perf	0.54	0.92

The representativeness of the constructs was measured by the CA and AVE of the model. These measures showed different characteristics according to data analyzed (see

Table 3). CA indicated enough consistent in all cases. However, AVE of constructs relating to HC did not reach 0.50; but, to be near that amount and components were coherent with the theory, then we accepted the representativeness of the constructs.

We selected the model that shows significance on all the relations among constructs. The construct composed of the items relating to HC significantly affects internal intellectual capital management. Proposition 4 is confirmed. Internal intellectual capital management 5%-significantly affects performance. In consequence Proposition 5 is confirmed. Management of these resources provides performance; by this core competence is a good mediator between HC and performance.

Table 4 lists estimation of effects and bootstrap t-statistics between constructs in the three models. The first model (HC_M) directly analyses relations between HC and performance. The second model (HCM_M) analyses relations among HC and HCM and relations between HCM and performance, i.e. HCM is mediator between HC and performance. Third model (ICM_M) analyses relations between HC and performance with internal intellectual capital management as mediator.

The construct composed of the items relating to HC significantly affects internal intellectual capital management. Proposition 4 is confirmed. Internal intellectual capital

management 5%-significantly affects performance. In consequence Proposition 5 is confirmed. Management of these resources provides performance; by this core competence is a good mediator between HC and performance.

Table 4 shows that the construct composed by the items related to HC does not significantly affect performance, possibly because some mediator is necessary. HC does not directly affect performance, what means that our proposition 1 it is.

The construct composed of the items relating to HC significantly affects HCM, possibly as this core competence is built on HC items, among others. Proposition 2 is confirmed. HCM only 10%-significantly affects performance. In consequence proposition 3 is not confirmed, with limitations.

The construct composed of the items relating to HC significantly affects internal intellectual capital management. Proposition 4 is confirmed. Internal intellectual capital management 5%-significantly affects performance. In consequence Proposition 5 is confirmed. Management of these resources provides performance; by this core competence is a good mediator between HC and performance.

Table 4. Effects between constructs

HC_M	Original Sample (O)	Standard Error (STERR)	T Statistics (O/STERR)
HC -> Perf	0.29	0.18	1.59
age -> Performance	-0.09	0.06	-1.38
size -> Performance	0.07	0.11	0.64
HCM_M			
HC -> HCM	0.96	0.01	97.62(***)
HCM -> Perf	0.30	0.16	1.85(*)
age -> Performance	-0.09	0.06	-1.38
size -> Performance	0.07	0.11	0.64
IICM_M			
HC -> IICM	0.91	0.01	65.67(***)
IICM -> Performance	0.29	0.12	2.51(**)
age -> Performance	-0.09	0.06	-1.38
size -> Performance	0.07	0.11	0.64

Table 5 shows that the differences impacts of HC on performance, directly or through mediators. The impact of HC is similar in the three cases, but only is significant when internal intellectual capital is the mediator.

Table 5. Human capital effects

HC -> Perf	Original Sample (O)	Standard Error (STERR)	T Statistics (O/STERR)
Direct	0.27	0.21	1.25
indirect through HCM	0.28	0.16	1.71(*)
indirect through IICM	0.27	0.11	2.46(**)

*Significant at p-level<0.1

** Significant at p-level<

*** Significant at p-level<

4. DISCUSSION AND IMPLICATIONS FOR MANAGEMENT

While there is a certain agreement on the importance of HC to achieve better business performance (Combs et al., 2006), many authors seek to understand explanations of the mediating mechanisms through which HC may drive performance (Wright & McMahan, 2011). The aim of this paper has been to study the mediator effects between HC and an organization's performance. The paper has analyzed three alternatives that can be complementary: a direct effect of HC on performance; HCM as a mediator in the latter relationship; and internal intellectual capital management as a mediator.

We honestly believe that our approach is suitable for facing successfully at least four of the eight critiques reported by Kraaijenbrink et al. (2010), hindering the application of KBV and RBV to intangible-based sources and to achieve a SCA. That is the case of the inability to achieve a SCA, the requirement of a VRIN resource to explain an organization's SCA, the indeterminate nature of a resource's value and the unworkable definition of resource. Moreover, those authors suggest the need for investigating resources by splitting them into categories –e.g., resources as inputs and resources as processes. We consider both types of resources, in terms of inputs –e.g. the human capital and in terms of process –e.g. their management, in our approach to build core competencies. Human capital can positively influence performance of the organization by enabling it to comprehend the complexities of various transferred business processes and execute the processes satisfactorily by adhering to quality, security and timelines aspects. However the impact is not direct. Human capital needs a mediator to achieve performance. The findings of the study indicate that this complexity must be managed in conjunction with other internal company resources, to facilitate the interaction of human resource and technology, resulting in a core competency (Lahiri et al., 2012).

The internal intellectual capital management encourages performance. This result covers several partial results on aspects of internal intellectual capital management, such as the corporate culture and technological capabilities of the company. In this paper we found that these effects occur when the company's strategy combines all these elements as core competence.

Further, the complementary effect of human capital and management capability on organization performance suggests that not only quality of employees is important, but also how they are managed and deployed. This observation has been a recurrent theme in most organizational research involving human talent (Hatch & Dyer, 2004) and adds to the growing body of literature concerning management of global talent (Tyman et al., 2010). Particularly, it suggests that in a dynamic and uncertain industry characterized by employee retention challenges (Bhatnagar, 2007), organizations need to invest in developing in-house resource management capability to reap the benefits of innovative knowledge assets such as human capital.

The greater the knowledge, skills and abilities of human resource best manage internal intellectual capital. While the propositions tested encompass results previously identified in the literature of organization with respect to importance of human capital, this model defines these findings and frames its validity. For example Hornsby & Kuratko (2003) propose that human resources have a positive effect on organization performance. This paper shows that this impact occurs when human resources are integrated into a core

competency with other resources and internal capabilities of the company and that does not occur directly but through the action of core competencies. Many authors emphasize the importance of defining practices of human resource management to improve the competitiveness of the company (Boselie et al., 2005). This paper have used these results as indicating that company's strategy integrates human capital with other resources and capabilities in a core competency.

HR literature highlights the importance of strategic HCM as mediator of human capital on performance (Marrewijk & Timmers, 2003; Hayton, 2003). The findings do not show this impact 5% significant. Human capital needs structural capital to effect performance. Therefore, besides the strategic management of human resources is necessary to consider the structural capital. That is, in order to establish lines of action with human resources SMEs should consider culture, organization and technology.

Kraaijenbrink, Spender, & Groen (2010) also emphasize the need for including the role of individual's judgment and mental models in value assessment and creation. Such is the case when human resources come to the process of developing human capital and core competencies through the managerial process, as we have explained. The problem of uniqueness can be also addressed successfully from our approach, since the core competences built by each SME are different from other organization. Those core competencies are a result of a managerial process, from human resource to human capital and beyond. As shown, not merely the HC is sufficient for having a significant impact on performance. Therefore, it seems that achieving a SCA does not involve only one single source but a combination of different resources. Here, the manager's and owner's judgment enter, shaping the final combination, as the latter authors claim. Hence performance can be considered as a proxy of the value of a resource, as a base for achieving a SCA. Without an above average impact on performance there is no SCA, according to industrial organization theorists (e.g. Porter, 1991), as well as evolving research on strategy. Ronda-Pupo & Guerras-Martin (2012) include a consensual definition of what strategy is according to research to date. The interaction between the organization's environment and the organization itself is a key. Building a core competence is a strategic managerial process, since it comprises its impact on performance by combining properly both external and internal resources.

Moreover, the most relevant issues are the lack of a direct impact of HC on performance, as well as the lack of significant impact of HCM on performance. This could be an evidence of problems related to intangibility of this type of resources, as extensively discussed and reported by Molloy, Chadwick, Ployhart, & Golden (2011) and emphasized by several authors as a barrier (Kraaijenbrink et al., 2010). The more the HC is deployed, the more HC the organization has, following the logic of a nonrivalrous resource (lack of scarcity). Therefore, whether HC can be the resource on which base a SCA is the key question arisen here. However, we argue that there is a step missed there. As a managerial process, it is the manager's and owner's judgment what shapes the core competences as a combination of external and internal resources. Despite such core competences are based on HC and HR, they are not enough to build a SCA (i.e. a core competence with higher impact on performance) but they need for other intangible elements, both internal (mainly forms of structural capital) and external (the value created while relating with the organization's environment, hence forms of relational capital). So, what is really scarce are the manager's and owner's capacities (in terms of use of their valuable knowledge, thus time and

judgment capacity). Therefore, SMEs compete not only for the value of managers, but for the value of combinations of managers in a context of the concrete organization (which includes structural plus relational capital). Elements of those core competencies are not valuable alone but within the context where those core competencies are deployed. This explains how SMEs in particular and any organization can really protect their SCA from being appropriated by competitors. The latter have to acquire the whole combination of the core competence if they want to appropriate a SCA like this.

Therefore, and following the critiques and suggestions to RBV and KBV (Kraaijenbrink et al., 2010), as well as considering the intangibility problem inherent to knowledge (extensively reported by Molloy et al. (2011)), we argue that isolated intangible sources of SCA are not sufficient conditions for outperforming competitors. Organizations need to make tangible the intangible through a managerial process which builds and yields core competencies. As a combination of both external and internal elements to the organization, as well as combining tangible and intangible elements, a SCA like this fits well under the VRIN principle. In addition, organizations following this strategic thinking can protect their SCA easier than those believing that knowledge is the key resource to be protected. We argue that context-dependency under which a core competency is built protect the SCA obtained. Meanwhile, knowledge-based SCA face the challenge of protecting a nonrivalrous resource (which is not scarce). They are constantly working under risky conditions since knowledge (even the most valuable) can be hardly protected from competitors. Therefore, we consider that organizations, particularly SMEs –with their inherent limitations can really compete successfully by finding, building and deploying their own core competences through combinations of external/internal and tangible/intangible elements, which stem mainly from HR and HC.

This paper uses a subjective assessment to measure both competitive advantages and performance. Yet some authors suggest that measuring performance subjectively may suit better to assess subjective aspects such as competitive advantages (Covin et al., 1990).

Our findings cannot be generalized to smaller organizations. Moreover, data collected over an expanding period of the business cycle can influence on the choice of competitive advantages and on the final assessment of businesses. However, since all the factors are similarly situated for all the organizations and industry sectors, picking up a timeless vision, the procedures can be applied to any other economy or geographical area. Finally, we should highlight the typical limitations when working with cross-sectional data, i.e. the assumption that the impact of HC is instantaneous. Investments and a period of time are needed to generate better performance from HC, as usual (Boselie et al., 2005). As a consequence, the estimators tend to underestimate the real impact. Future research could face this challenge by monitoring the sample with panel data to assess how organizations achieve competitive advantages over time.

The HC has an important impact on organization performance through internal intellectual capital management. As a result, the KSAs of human resources possibly should be focused on fostering integration of intellectual capital. Moreover, despite core competencies are knowledge-based elements, they are not solely human. They are comprised of human capital and structural capital, while internalizing external value through relational capital. This does not negate the importance of human resources; in fact, it amplifies them and extends its relevance beyond the merely practices of HRM, since HC is the key strategic resource and source of SCA (Wright et al., 2001).

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