

# INTELLECTUAL CAPITAL REPORTS IN SPAIN: A CASE STUDY

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## ACADEMIC TRACK

**Abstract:** There are three main parts to this paper. First, the increasing importance of organizational knowledge-based resources is addressed. Second, a review of the most significant on intellectual capital is presented. Third, it is showed a picture of how Spanish firms measure and report intellectual capital. This situation is compared with intellectual capital reports of firms from other countries.

Academics and practitioners agree with the proposition that traditional financial statements do not offer a holistic view of the company's value. The corporate annual report is viewed as a means by which corporations seek to establish an image in the public sphere. However, these statements do not grasp the value of strategic intangible resources that are crucial for the firm's sustained competitive advantage. Endeavors to reconstruct corporate annual reporting to include intellectual capital indicators were spearheaded in the early 1990's by a small number of firms which took a particular interest in the issue (Mouritsen et al., 2001; Ordóñez de Pablos, 2000, 2001, 2002; Petty and Guthrie, 2000). The root of the intellectual capital report tradition is in Sweden. Back in 1994, the Swedish insurance company Skandia published the first intellectual capital report in the world (Skandia, 1994; 1996). Following this pioneer way of reporting on intangible resources, Danish firms started to elaborate their intellectual capital report. Firms such as Carl Bro, Cowi and Systematic (Bukh et al., 2001; Danish Agency for Development of Trade and Industry, 2000, 2001) have elaborated the intellectual capital report, a report that complements the financial information provided by the Annual Report. Another European country with firms working on the building of the intellectual capital report is Spain. Back in 1998, Mekalki, a small firm from the Basque Country (Spain) elaborated its first intellectual capital report. Other Spanish firms that also build this report are BBVA, BSCH, Bankinter and Union Fenosa.

**Keywords:** case study; intellectual capital report; Spain.

## **INTRODUCTION**

Firstly we will analyze the main strategic implications from the resource-based view (RBV) of the firm. This theory explains how and why firms achieve a sustained competitive advantage. The underlying idea is considering a firm as an accumulation of unique resources with diverse nature (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984).

Organizational resources have been defined as diverse nature resources that prepare firms to conceive and implement strategies that improve their efficacy and efficiency, thus generating and increase in their competitiveness (Amit and Schoemaker, 1993; Grant, 1991, 1996; Schoemaker and Amit, 1994). Aaker (1989) states that the route to achieve a sustained competitive advantage is an active and skill management process, comprising the following phases: 1) identification of these actives and skills that are strategically relevant, 2) selection of those that are important for the future needs of the market, and 3) implementation of programs which will develop, enhance and/or protect these resources.

Itami and Roehl (1987) consider that a central element of strategy is the management of invisible assets (know-how, reputation, etc.). They suggest that every turn of the business cycle should add value to the know-how base of the firm in the areas of core competences. This leads to the view that an organization needs to make strategic decisions regarding which know-how areas it wishes to enhance (Hall, 1992).

Due to the importance of having, identifying and exploiting strategic resources in order to develop a strategy that allows competing on this base of resources, firms are really interested in identifying, knowing and analyzing their resources and capacities in order to uncover those that are considered superior or distinctive.

In the Knowledge Economy, knowledge has become the strategic resource for firms competing in dynamic environments. Organizational knowledge can be analyzed in two forms: static and dynamic. The intellectual capital research field represents the static approach towards organizational knowledge. Knowledge management represents the dynamic analysis of organizational knowledge. Both approaches are complementary and contribute to the building of a holistic view of the firm.

### *Knowledge Management*

Knowledge management is the process of capturing firm's knowledge and using it to foster innovation through a spiral of organizational learning (Nonaka, 1991, 1994; Nonaka and Reinmoeller, 2000; Nonaka and Takeuchi, 1995; Ordóñez de Pablo, 2000, 2001; Von Krogh and Grand, 1999; Wiig, 1993, 1995, 2000). Organizational knowledge creation may be defined as a process across two major dimensions: ontological dimension and epistemological dimension. The first dimension involves learning at individual, group, and organizational level. The second dimension considers there are two types of knowledge: explicit and tacit knowledge (Polanyi, 1966).

Starting at individual level the spiral of knowledge creation moves up toward the group and organizational level at the same time the process of conversion from tacit to explicit knowledge and viceversa occurs. The mobilized tacit knowledge is "organizationally" amplified through these modes of knowledge conversion and finally crystallized at higher ontological levels. Several knowledge conversion modes occur in the spiral of organizational knowledge creation: combination, socialization, externalization and internalization. This conversion involves explicit knowledge and tacit knowledge (Polanyi, 1966).

All these issues related to knowledge management and organizational learning should be integrated into the organizational knowledge strategy if organizations are really serious about sustaining their competitive advantage.

So far knowledge management has gone at least through three phases. As Sveiby (2000) states the first phase was from around 1985 to 1990. In it, researchers took their inspiration from philosophers such as Wittgenstein and Polanyi and they explored the value created by leveraging the competence and skills of people and knowledge creation. The second phase was around 1991-1997. The information technology (IT) revolution and the Internet started driving change in organizations. All was about reusing existing knowledge and how to avoid re-inventing the wheel. In this second phase knowledge management and intellectual capital terms became the highlights of conferences and publications in both Europe and USA. These terms were seen basically as means to increase organizational efficiency. Since 1998 we are living in the third phase of Knowledge Management and Intellectual Capital Management. The hot topics are organizational knowledge creation and innovation knowledge management. More and more managers realize of the importance of creating suitable environments where employees feel comfortable to collaborate, create, diffuse and share their individual knowledge (Sveiby, 2000).

As Chase (1997) states "whilst organizations recognize the importance of creating, managing and transferring knowledge, so far they have been unable to translate this competitive need into organizational strategies". In broad terms, two major types of knowledge management could be identified: operational knowledge management and strategic knowledge management (Tissen *et al.*, 1998). On the one hand, the main concern of operational knowledge management is to connect people to the system being used for the distribution and transfer of knowledge. On the other hand, strategic knowledge management is a process that links organizational knowledge with 1) the design of organizational structures that foster knowledge, 2) business strategy and 3) the development of knowledge workers.

**\*INSERT HERE FIGURE 1**

## A CONCEPTUAL FRAMEWORK FOR INTELLECTUAL CAPITAL

The problem of management of organizational knowledge is not new and there have been other theories that have tried to tackle it. As Roos *et al.*, (1998) put it, intellectual capital is the latest development in this line of research. In particular, the theoretical roots of intellectual capital come from two different streams of research: strategy and measurement. While the first stream studies knowledge management –that is to say, knowledge creation, acquisition, diffusion, capitalization, conversion, transfer and storage- the second stream of research focuses on the measuring of intellectual capital. This stream has advanced towards the elaboration of intellectual capital reports and the building of international standards on intellectual capital measuring and reporting. As the first stream of research studies knowledge management and it was briefly tackled in the first section of this paper, now we are going to focus on the second stream of research: measuring and reporting intellectual capital.

A broad definition of intellectual capital states it is the difference between the company's market value and its book value. Knowledge-based resources that contribute to the sustained competitive advantage of the firm form intellectual capital. However these resources are not registered in the financial accounts. In contrast with tangible resources, the payoff and value of investments in firm's current stock of knowledge (intellectual capital) will not appear in the financial accounting until later on. By all these reasons, knowledge-based resources must now being identified, dissected and analyzed.

Prior to continuing the dissertation on the strategic relevance of intellectual capital reports, it may be helpful to conceptualize what the components of intellectual capital are (Edvinsson, 1997; Edvinsson and Malone, 1998; Sveiby, 1997).

Although definitions and conceptualisations are not entirely identical, the field is starting to see a convergence of what IC encompasses (Bontis, Chong and

Richardson, 2000). Generally literature has identified three sub-phenomena that constitute the concept of intellectual capital: human capital, relational capital and organizational capital.

Quite simply, human capital represents the individual knowledge stock of an organization as represented by its employees (Bontis *et al.*, 2001 forthcoming). It is the accumulated value of investments in employee training, competence and future (Skandia, 1996). Human capital is important because it is a source of innovation and strategic renewal [...] The essence of human capital is the sheer intelligence of the organizational member. The scope of human capital is limited to the knowledge node (i.e. internal to the mind of the employee). It can be measured (although it is difficult) as a function of volume (i.e. a three degree measure encompassing size, location and time). It is also the hardest of the three sub-domains of intellectual capital to codify (Bontis, 1998: 65-66).

The concept of structural capital refers to the value of what is left when the human capital –the employees– has gone home. Databases, customer lists, manuals, trademarks and organizational structures, to give a few examples (Skandia, 1996). According to Bontis, Chong and Richardson (2000) structural capital “includes all the non-human storehouses of knowledge in organisations which include the databases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value” (p. 88). Human capital and structural capital are an indication of a company’s future value and ability to generate financial results. This is why a more systematic method of reporting on and managing these intangible dimensions is needed (Skandia, 1994:6).

Bontis (1998) reminds us of the fact that organization itself embodies structural tacit knowledge, which exists in:

*The myriads of relationships that enable the organization to function in coordinated way [but] are reasonably understood by [at most] the participants in the relationship and a few others ...". This means that "the organization is ... accomplishing its aims by following rules that are not known as such to most of the participants in the organization" (Winter, 1987, p. 171).*

Relational capital and organizational capital form structural capital. Relational capital represents the relationships with internal and external stakeholders (Roos et al., 1998). It is the knowledge embedded in organizational relationships with customers, suppliers, stakeholders, strategic alliance partners, etc.

This Swedish insurance company Skandia considers that the customer base, customer relationships and customer potential form customer capital. The size and structure of the customer base is crucial to a firm's future value because customer relationships are the origin of the financial flows. Skandia states that "every customer contact is an investment in a mutual, value-creating relationship [...] the firm creates long-term growth in value by investing in customer relationships. But by adopting a greater customer focus, we do more than create value. We also contribute to the success and growth in value for our customers" (1996: 3).

A more refined description of organizational capital would demand differentiating between innovation capital and process capital. Skandia (1996) declares that:

*Innovation capital refers to the explicit, packaged result of innovation, in the form of protected commercial rights, intellectual property, and other intangible assets and values. Harnessing this power of innovation requires a more dynamic perspective and a synchronized focus on human and structural capital for renewal. Thus the power of innovation is found in the border zone between human capital and structural capital. The goal is to achieve a multiplicative effect in order to enhance rapid knowledge sharing and develop new business applications. In doing so, new value is created [.*

.] A company's strategy for growth, competence development and competence renewal can bear great significance for its future value. The power of innovation creates value in that innovation capital is either recycled or generated anew (Skandia, 1996: 4).

Intellectual capital provides firms with a huge diversity of organizational value such as profit generation, strategic positioning (market share, leadership, name recognition, etc.), acquisition of innovations from other firms, customer loyalty, cost reductions, improved productivity and more (Harrison and Sullivan, 2000). Successful firms are those which routinely maximize the value from their intellectual capital.

## **INTELLECTUAL CAPITAL MEASURING TOOLS**

Firms have always used tools to assess their assets. Traditionally the focus of these tools has been the tangible and financial assets. Examples of these tools are Economic Value Added (EVA), Market Value Added (MVA) and cash flow measures.

The coming of the Knowledge Economy have demanded the design of new managing and measuring tools for a special type of intangible resource: organizational knowledge.

Tobin's Q is one of the first approaches to measure firm's intellectual capital. This tool developed by Nobel Prize winner James Tobin measures the ratio between market value and reposition value of organizational physical assets.

Among these tools for managing company's stock of knowledge is the Skandia Navigator, the Intellectual Assets Monitor (Sveiby, 1997), Balanced Scorecard (Kaplan and Norton, 1992, 1993, 1996), Technology Broker (Brooking, 1996) and Competence Strategic Management Model (Bueno, 1998)

### *The Skandia Navigator*

In 1991, Skandia started to work on the building of intellectual capital tools. The well-known Skandia Value Scheme and the Skandia Navigator are two models for highlighting and describing the evolution on intellectual capital within Skandia. These models visualize value components that make up intellectual capital as well as the method of managing them and reporting on their development.

Skandia Navigator is designed to provide a balanced picture of the financial and intellectual capital. Its greatest advantage is "the balanced total picture it provides of the operations" (1994: 15). The focus on financial results, capital and monetary flows is complemented by a description of intellectual capital and its development. Indicators that specify both the level and change are highlighted. At Skandia, the intellectual capital ratios are grouped into major focus areas: the customer focus, the process focus, the human focus and the renewal and development focus.

### *Intangible Assets Monitor*

Another tool is the Intangible Assets Monitor (Sveiby, 1997). It represents a theory of stocks and flows which aim is to guide managers in the utilization of intangible assets, the identification and renewal of these flows and stocks and the avoiding of its loss. This tool is focused on three types of intangible assets: external structure assets, internal structure assets and employee competence assets.

The Swedish firm Celemi uses this intangible assets measuring tool. In its Invisible Balance, Celemi classifies its assets in three main categories: "our clients" (external structure assets), "our organization" (internal structure assets) and "our people" (employee competence assets). Celemi has also developed different tools that assess and better understand its intangible assets. Tango is one example of this. This simulation tool identifies key intangible assets, measures and manages them in coordination with firm's tangible assets. Intangible assets are studied at

three different levels: 1) growth and renewal, 2) efficiency and 3) stability of firm's parameters.

#### *Balanced Scorecard*

It is one of the first tools that aims to create an integral vision of measurement systems for management, including not only financial elements but those non financial elements (market, internal processes and learning) that influence organizational performance.

The Balanced Scorecard (BSC) complements the information provided by traditional tools with three additional views: clients, internal and business processes, and learning and growth. They allow controlling the building of capacities and the acquisition of intangible assets needed for future growth.

The BSC model proposes that an organization must meet the requirements of three groups of people if it wants to achieve success: investors, customers and employees.

#### *Technology Broker Model*

Annie Brooking (1996) develops this model in her book Intellectual Capital. The model states that the market value of a firm consists of two elements: tangible and intangible assets. Intellectual capital is formed by four asset categories: market assets (brands, customers), human assets (education, specific task knowledge, skills), intellectual property skills (patents, copyrights, design rights, commercial secrets) and infrastructure assets (organizational culture, information systems, business philosophy).

#### *Competence Strategic Management Model*

Bueno (1998) defines intellectual capital as "the set of basic distinctive competences of intangible nature that creates and sustains the competitive

advantage" (p. 84). He proposes that intellectual capital can be represented by the following formula:

$$IC = HC + OC + TC + RC$$

where IC = intellectual capital, OC= organizational capital, TC = technology capital and RC= relational capital.

Bueno (1998) says that a basic distinctive competence has three elements: attitudes (A), knowledge ( $C_o$ ) and capacities ( $C_a$ ). So if these components are replaced in the intellectual capital formula, then:

$$IC = (A^h + C_o^h + C_a^h) + (A^o + C_o^o + C_a^o) + (A^t + C_o^t + C_a^t) + (A^r + C_o^r + C_a^r)$$

## **INTELLECTUAL CAPITAL REPORTS**

Academics and practitioners agree with the proposition that traditional financial statements do not offer a holistic view of the company's value. As Guthrie and Petty (2000) state "the corporate annual report is viewed as a means by which corporations seek to establish an image in the public sphere". However, these statements do not grasp the value of strategic intangible resources that are crucial for the firm's sustained competitive advantage.

Endeavours to reconstruct corporate annual reporting to include intellectual capital indicators were spearheaded in the early 1990's by a small number of firms which took a particular interest in the issue (Petty and Guthrie, 2000).

The root of the intellectual capital report tradition is in Sweden. Back in 1994, the Swedish insurance company Skandia published the first intellectual capital report in the world (Skandia, 1994; 1996). Following this pioneer way of reporting on intangible resources, Danish firms started to elaborate their intellectual capital report. Firms such as Carl Bro, Cowi and Systematic (Bukh *et al.*,

2001; Danish Agency for Development of Trade and Industry, 1997, 2000; Mouritsen *et al.*, 2001) have elaborated the intellectual capital report, a report that complements the financial information provided by the Annual Report.

Another European country with firms working on the building of the intellectual capital report is Spain. Back in 1998, Mekalki, a small firm from the Basque Country (Spain) elaborated its first intellectual capital report. Other Spanish firms that also build this report are BBVA, BSCH, Bankinter and Union Fenosa. These firms are well aware of the importance of knowledge, both internal (employees, managers) as well as external knowledge (customers, suppliers, partners, etc.).

Let's start with the definition of what the intellectual capital report is. The Danish firm Systematic states that the intellectual capital reports offers "a holistic and overall picture of the firm with emphasis on intangible and "soft" values" [...] It is not the purpose, however, to fix a total amount of intellectual capital [...] The intellectual capital report contains verbal descriptions and key figures that provide the reader with a balanced picture of the intellectual capital of the business (1999: 6).

According to Carl Bro Group, "the purpose of the Intellectual Capital Accounts is to measure the extent to which Carl Bro as a company has and is developing the qualifications for supplying intelligent solutions and hence for ensuring future earning. In this context, our IC, our attitudes and our philosophy (mission, vision and values) are significant parameters" (2001: 4).

#### *Major areas in the intellectual capital report*

Prior research on intellectual capital reports from firms in Asia, Europe and The Middle East shows the following conclusions (Ordóñez de Pablos, 2001; 2002)

Firstly, the analysis of these reports shows that three major areas are taken into consideration: human capital, relational capital and structural capital. They include a comparative view of figures for each area with reference to both current year and past years. In addition, goals are set for a period of time: short and long term. They are stated in terms of increase, decrease or maintenance of data. They show target evolution for key indicators. Secondly, each area is comprised by the following groups of indicators.

#### *Human capital area*

Six sections form our proposed area for human capital: 1) employee profile, 2) staff turnover, 3) education, 4) commitment and motivation, 5) training and 6) results.

- Employee profile: this section provides data on gender and age distribution, and number of employees working in the production, distribution, IT, sales and marketing and administration departments.
- Staff turnover: includes data on beginners, resigned staff and circulation % of personnel, among others.
- Education: includes employees' academic formation and experience (unskilled personnel versus skilled personnel, bachelors, PhD personnel, international experience, etc).
- Commitment and motivation: as stated in the title, two main indicator categories are set. Commitment indicators include among others, seniority and % of promoted staff/total staff. Motivation indicators include % of promoted staff/total staff, % of staff feeling explicit recognition, % of staff feeling their opinions are taken into account or that they are happy with the working environment.
- Training: includes indicators about formation provided by the firm. Indicators like training days per employees, ratio training hours/working hours (per year), training investment (employee/year), measure this category.
- Results: shows global satisfaction with the job. Generally it is measured with an employee satisfaction index. Other measures are also included, such as absence due to sickness and injuries with loss of working hours.

### *Structural capital area*

This area is structured into 6 major sections: 1) general infrastructure, 2) knowledge-based infrastructure, 3) innovation, 4) quality and improvement projects, 5) customer support and 6) administrative processes.

- Infrastructure: acts as an indicator of firm's equipment regarding to offices, computer capacity, phone services, etc.
- Knowledge-based infrastructure: measures the utility of firm's Intranet and databases. Examples of indicators are number of best practices on the Intranet, % of updated knowledge documentation on the Intranet and so.
- Customer support: shows firm's capacity for closeness to potential and real customers.
- Administrative processes: reflect the efficiency in attending enquiries.
- Innovation: gathers information on investments in product and process development, number of new services /products, etc.
- Quality improvements: assess accreditations and certifications in the firm. It includes indicators from number of ISO 9000 certifications to number of employees with formation on total quality and number of improvement projects.

### *Relational capital area*

In early reports we found that some firms used the term customer capital. Customer capital is the knowledge embedded in the marketing channels and customer relationships that an organization develops through the course of conducting business (Bontis, 1999).

However, firms replaced this term with the term relational capital later. It is a broader term that encompasses not only the value of customer relationships but also the value of relationships with shareholders, government, partners and so.

This area is comprised of four main sections: 1) client profile, 2) customers, image and stakeholders, 3) diffusion and networking and 4) intensity, collaboration and connectivity.

## **THE INTELLECTUAL CAPITAL REPORT: THE CASE OF SPAIN**

The aim of this section is to provide a holistic model for intellectual capital reporting in Spanish pioneer firms. Several objectives for the empirical research were set. Firstly, we wanted to determine the extent to which top Spanish firms are publicly reporting their intellectual capital. Secondly, we decided to analyze how these companies manage, measure and report the three basic components of intellectual capital. Recently, we analyzed intellectual capital reports in pioneer firms in Asia, Europe and The Middle East (Ordóñez de Pablos, 2001; 2002). With this perspective in mind, we wanted to specifically analyze intellectual capital reports in Spain, with particular attention to the differences between Spanish and other countries' intellectual capital reports.

In May 2000, as part of the doctoral research of the author of this paper, a survey questionnaire was sent to 2,136 Spanish manufacturing firms with more than 100 employees. The survey questionnaire covered four main areas: knowledge management, intellectual capital (measuring and reporting), organizational learning and human resource management. From this survey, it was clear that the intellectual capital and knowledge management field is in an embryonic state in Spain. Finally, we received 129 valid survey questionnaires.

One issue addressed in the survey questionnaire was if the firm had a knowledge management director. Only eleven firms out of the 119 firms of the sample answered they had created a knowledge management director position. It is interesting to note this "pioneering" group of firms was also measuring their intellectual capital.

Our analysis of intellectual capital measuring and reporting shows that most firms have only stated the importance of knowledge based resources but have done little in terms of implementing knowledge management strategies and measuring and reporting intellectual capital.

With the results of the survey, we selected five firms: BBVA (a bank), Banco Santander Central Hispano (BSCH) (a bank), Bankinter (a bank), Mekalki (a small industrial firm) and Union Fenosa (an electrical firm) to analyze their intellectual capital reports. The following conclusions are drawn.

Firms initiate themselves in the field of intellectual capital by setting up a company model which relates organizational foundation (organizational vision, values and goals), efforts (people, processes, infrastructures, etc) and results ("soft" results related to employees, customers, etc as well as financial results).

Secondly, the report addresses the importance of knowledge management in today's competitive environment. Union Fenosa's intellectual capital report offers an excellent example of this.

Finally, the third part of the intellectual capital report presents the intellectual capital accounts. In the building of the intellectual capital report, Spanish firms have chosen to use one of the most well-known frameworks for understanding intellectual capital that was developed by Skandia: the Skandia Navigator. Basically firms classify their intellectual capital into three main categories: human capital, relational capital and structural capital.

## **Idiosyncrasy of intellectual capital reports in Spain**

In contrast with reports from firms operating in Asia, The Middle East and other European countries, we propose the following conclusions about intellectual capital reports in Spain.

Most Spanish firms building the intellectual capital report include it as part of their annual report. In comparison with the comprehensive Danish and Swedish reports, the Spanish intellectual capital report is just 3 or 4 pages in extent. In broad terms, these reports describe the importance of firm's intellectual capital for sustained competitive advantage and provide just a few indicators for intellectual capital components. These indicators are just accompanied by a few sentences basically defining human capital, relational capital and structural capital.

The following recommendations for Spanish intellectual capital reports are proposed. Firstly, more information needs to be incorporated in the Spanish intellectual capital report. Firms must clearly state why they decide to manage their knowledge-based resources and how they measure and report them.

Secondly, knowledge management is important enough to have a specific section in the intellectual capital report. Firms are advised to include information about their chief knowledge officer position (CKO), knowledge management objectives and strategies and present and future knowledge management projects.

Thirdly, although intellectual capital indicators are important, it is not enough with reporting just a few intellectual capital indicators. In the intellectual capital section of the report, firms should state which measurement tools they use to measure their intellectual capital, how these intellectual capital indicators were obtained, etc. In sum, firms must provide more than just intellectual capital indicators without explaining these figures.

Regarding to the intellectual capital section of the report, we must highlight the following deficiencies we found in the Spanish report in comparison with pionner firms in building the intellectual capital report. Now we will show the completeness degree of the Spanish intellectual capital report, crossing which indicators are used in these reports in Spain.

### *Human capital*

Human capital section of the Spanish intellectual capital report is not enough comprehensive. Basically, only employee profile, commitment and motivation and training indicator areas are reported. This section must also cover staff turnover, education and performance indicators (see *Table I* ).

**\*INSERT TABLE I**

*Relational capital*

Although Spanish firms, in the same line with their counterparts, define relational capital as valuable relations with customers, suppliers, strategic alliance partners, government, investors and shareholders, Spanish intellectual capital statements report relational capital basically as customer capital (see *Table II* ).

**\*INSERT TABLE II**

Clearly, this area requieres more indicators showing the real value of firm's external relations.

*Structural capital*

The area of infrastructure, customers support and administrative processes are relatively well covered. However, urgent attention is needed in the innovation, quality and improvements and knowledge-based infrastructure section (see *Table III* ).

**\*INSERT TABLE III**

*Interrelationships among intellectual capital components*

It would be too simplistic to argue that intellectual capital components do not interact among them. As empirical studies in Canada (Bontis, 1998), Malaysia (Bontis, Chong and Richardson, 2001) and Spain (Ordóñez de Pablos, 2001) show, human capital, relational capital and structural capital, that is to say, the components of intellectual capital, interact among them. In its intellectual capital report, Banco Santander Central Hispano (BSCH) explicitly states the fact that organizational knowledge stocks dynamically interact. In particular, BSCH highlights the importance of knowledge flows from human capital and relational capital to structural capital.

### **Motivations behind the building of the intellectual capital statements**

As Banco Santander Central Hispano highlights, the objective of their intellectual capital is double. On the hand hand, it substantiates its forecast and expectations and on the other, it shows that measuring intellectual capital helps to manage in order to guarantee a sustained positive impact on the group's value.

### **CONCLUSIONS**

Basically intellectual capital reports are structured into three main sections. The first section describes the firm in terms of mission, vision and values. The second section addresses knowledge management activities in the firm, from knowledge management objectives and projects to knowledge management strategies. Finally, the third section of the intellectual capital report presents the intellectual capital statements with indicators for the three main components of intellectual capital: human capital, relational capital and structural capital. These non-financial indicators are accompanied with a text explaining significant facts related to the indicators.

The analysis of intellectual capital reports in Spain shows the following conclusions. Although Spanish firms are engaging in the process of identifying,

measuring and reporting their knowledge-based resources, overall Spanish companies do not compare favourable with their Danish and Swedish counterparts in terms of the building of the intellectual capital report.

The intellectual capital report needs to gain its own status, not just being a 2-3-page appendix to the Annual Report. In Spain, the bank sector is significantly ahead of any other in its intellectual capital measuring and reporting techniques. Spanish banks like Bankinter, BBVA and BSCH elaborate the intellectual capital report.

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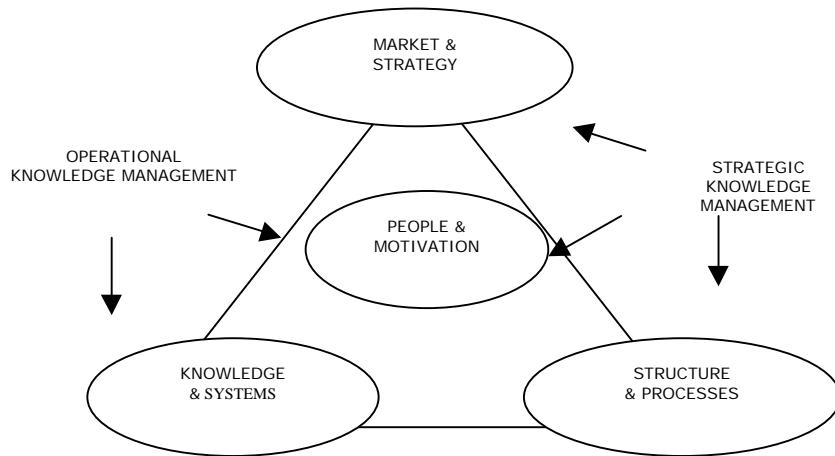
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## APPENDIX

**Figure 1.** Knowledge management



**Source:** Adapted from Tissen, Andriessen and Deprez (1998, pp. 26, 34)

**Table I.** List of human capital indicators

<b>HUMAN CAPITAL</b>					
	<b>Spain</b>	<b>Year <math>t-1</math></b>	<b>Year <math>t</math></b>	<b>Short term</b>	<b>Long term</b>
<b>EMPLOYEE PROFILE</b>					
Total number of staff					
• Production					
• Distribution					
• IT Department					
• Sales and marketing					
• Administration					
• Product development, environment and quality					
No. of managers					
% of research staff					
Gender distribution					
• Male	X				
• Female					
Average age of employees	X				
Age distribution	X				
No. of employees full time					
No. of participants in best practices processes					
No. of knowledge management projects					
<b>STAFF TURNOVER</b>					
Beginners					

Resigned					
Circulation % of personnel					
<b>EDUCATION</b>					
Unskilled personnel					
Skilled personnel					
Office personnel					
Trade personnel					
IT personnel					
Bachelors					
Academics					
PhD personnel					
Number of awards					
Number of competence development plans					
Number of carrier development plans					
International experience (traveling activities)					
<b>COMMITMENT AND MOTIVATION</b>					
Average seniority	X				
% of staff with variable retribution	X				
Suggestions systems (money prizes, point prizes)					
% of promoted staff/total staff	X				
% of staff feeling explicit recognition	X				
% of staff feeling their opinion is taken into account	X				
% of staff happy about the working enviroment	X				
<b>TRAINING</b>					
Training days per employee	X				
Ratio training hours/working hours (annual)	X				
Ratio training cost/ wages (annual)	X				
Training investment (employee/year)	X				
<b>RESULTS</b>					
Employee satisfaction index					
Satisfaction with the opportunity for on-the-job skills development					
Total satisfaction with the opportunity for on-the-job skill development					
Absence due to sickness (days/employee)					
Officials					
Hourly paid workers					
Personal injury with loss of working hours					
Personal injury with minor personal injuries					

† Note: X symbol shows indicators used in Spanish intellectual capital reports

**Table II.** List of relational capital indicators

RELATIONAL CAPITAL	Spain	Year t-1	Year t	Short term	Long term
<b>CLIENT PROFILE</b>					
• Public clients					
• Semi-public clients					
• Private clients					
• Others					
<b>CUSTOMERS, IMAGE AND STAKEHOLDERS</b>					
Number of contracts					
Points of sale					
First-time customers					

New stakeholders						
Exposure to the media						
Clients' impression of the firm						
Customer loyalty index	X					
Market share	X					
Customer satisfaction index	X					
Spontaneous notoriety index						
5 largest customers during the year						
Duration of existing customer relationships						
% of customers who would recommend our firm						
New strategic customers during the year	X					
Relational marketing						
Value perception						
No. of unsolicited applications, hourly-paid employees						
No. of contacts with investors and analysts						
No. of favourable recommendations from analysts						
No. of solved consultations from shareholder's information office						
<b>DIFFUSION AND NETWORKING</b>						
Number of conferences attended						
Lectures at scientific conferences						
<b>INTENSITY, COLLABORATION AND CONNECTIVITY</b>						
Number of operations done via phone						
Number of alliances with Business Schools						
Number of countries where the firm operates	X					
Number of commercial alliances	X					

† Note: X symbol shows indicators used in Spanish intellectual capital reports

**Table III.** List of structural capital indicators

STRUCTURAL CAPITAL	Spain	Year t-1	Year t	Short term	Long term
<b>INFRASTRUCTURE</b>					
(Office, computer capacity, phone service)					
m <sup>2</sup> office space					
Investment in premises and office equipment					
Investment in computer equipment					
IT expense per employee					
PCs per office	X				
Employees connected via email	X				
No. of servers per worker					
No. of hits on web-site per day					
Average number of homepage hits per month					
Employees with the option of teleworking					
Shared knowledge databases					
<b>CUSTOMER SUPPORT</b>					
No. of national offices	X				
No. of offices abroad	X				
<b>ADMINISTRATIVE PROCESSES</b>					
Average response time for calls to switchboards	X				
% of enquiries handled within the same day	X				
<b>INNOVATION</b>					
No. of products/services	X				
No. of new products/services	X				

Investment in product development					
Investment in process improvement					
Total innovation					
% of group turnover					
<b>QUALITY AND IMPROVEMENTS</b>					
Accreditations and certifications					
Number of ISO-9000 certifications	X				
Number of quality committee					
Number of improvement groups					
Number of employees with formation on total quality					
Employee participation in internal improvement and technological innovation projects					
<b>KNOWLEDGE-BASED INFRASTRUCTURE</b>					
No. of best practices on the intranet					
Shared documents on the Intranet					
% of updated knowledge documents on the intranet					
No. of databases to which the firms has access					

† Note: X symbol shows indicators used in Spanish intellectual capital reports