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**WHAT IT MEANS IS WHAT IT DOES:
A COMPARATIVE ANALYSIS OF
IMPLEMENTING INTELLECTUAL CAPITAL
IN NORWAY AND SPAIN**

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ABSTRACT

The implementation of the Intellectual Capital concept at firm level introduces new vocabulary to the existing language set. Firms are attempting to make sense of the concept and, in the process, operationalize it in terms of specific management tools. This paper provides a comparative analysis of Intellectual Capital trajectories in Norway and Spain. Although the implementation designs are different, (selected SMEs and sector in Norway and more non-selected in Spain), the paper finds that a dominantly accounting perspective can lead to an excessive focus on measurement issues and little attention to management processes. Alternatively, introducing IC with a broader and less defined focus might help newcomers to experiment with the concept in a more open minded way. In non-experienced firms the entrance point matters, as it defines the meaning for new words and concepts such as intellectual capital or intangibles.

Key words: Intellectual capital, implementation, syntax.

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INTRODUCTION

Intellectual Capital has drawn wide spread attention throughout Europe and the United States with its claim that it can uncover the hidden resources of the firm (Blair and Wallman, 2001). Particularly, accounting for and disclosing of a firm's intangible assets, with the latter defined as to include more than the traditional accounting definitions of intangible assets, is postulated to provide more comprehensive information than available in conventional accounting formats (Lev and Zarowin, 1999; Aboody and Lev, 1998; Amir and Lev, 1996).

In Europe and notably in Scandinavia, the concept of Intellectual Capital (IC) has some historical roots being the location of several firms that have been experimenting with the concept for a period of 10 to 15 years (Liyanage *et al*, 2002).

As a result, in those countries with extensive experience, the concept of Intellectual Capital has had time to mature in specific pockets of experimentation, generating specific interpretations and operationalizations beyond the ones that have been widely published in the Anglo-Saxon literature. Introducing new IC management systems to account for intangibles in Scandinavia is, therefore, facilitated by the common understanding of the meaning of IC and intangibles.

However, many firms are newcomers to the concept of Intellectual Capital and are wrestling to make sense out of it, attracted as they originally are by the claims of increased resource transparency and more encompassing managerial control. The newcomers are particularly relevant for management accounting research in their implementation and change efforts because it is in these sense-making exercises that accounting unfolds itself in all its possibilities and constraints.

But when newcomers turn to these insights which have originated from 10 years of experience, they all receive the same message: to start measuring in order to manage their IC. That is, to take an accounting perspective from the start. However, as Davenport and Prusak (2000) suggest, accounting seems to be a wrong anchor when dealing with IC (or knowledge) management issues for the first time. A variety of approaches and skills are needed if we want the IC management system to prosper over time.

In this paper, we follow two implementation trajectories of Intellectual Capital, one in Norway and one in Spain, both involving newcomers, i.e., non-experienced firms experimenting with Intellectual Capital. Based on these trajectories, we will illustrate how a nascent concept such as IC is strongly influenced by how it enters the firm.

The paper is based on a comparative analysis of how two, nationally different sets of firms are introduced to intellectual capital, how they justify and integrate their interest in intellectual capital into managerial routines, and how these

simultaneous processes of syntax development and functional change become constituted.

We argue that having a dominant accounting perspective when dealing with IC issues for the first time, can lead to an excessive focus on measurement issues and little attention to management processes. In this sense, an accounting focus might act as a barrier to the implementation of an effective IC *management* system. Alternatively, introducing IC with a broader and less defined focus might help newcomers to experiment with the concept in a more open-minded way. The main argument is that in non-experienced firms the entrance point matters, as it defines the meaning for new words and concepts such as intellectual capital or intangibles.

The paper is organised as follows: First, we describe the concept of intangibles and Intellectual Capital and how these new approaches interact with traditional management accounting tools. Second, we introduce the research problem and describe the cases selected for discussion. Then, we provide and discuss the results of each introductory pathway comparing them to generate common findings regarding the adoption of Intellectual Capital by the entities involved. Finally, the paper concludes by relating the common findings to the way forward on researching Intellectual Capital, including overcoming the limitations of this study.

1. INTRODUCING THE RESEARCH PROBLEM

The main purpose of the paper is to indicate the importance of *how* we introduce the concept of intangibles and intellectual capital into non-experienced firms (newcomers). In this section, we discuss the concept of intangibles and intellectual capital, and how these new approaches interact with the traditional tools of management accounting. We will briefly describe the new emerging models and tools as a way of introducing the research approach. Subsequently, the national experiences in Norway and Spain will be justified, and the methodological approach described.

1.1. INTANGIBLES AND INTELLECTUAL CAPITAL

As indicated by recent literature reviews on the topic (Petty and Guthrie, 2000; Cañibano *et al.*, 2000), the first discussions about the growing importance of intangibles in the economy and within the organizations appeared during the eighties. However, most contributions emerged during the nineties in a variety of fields (Chaminade and Roberts, 2002) such as accounting (Cañibano *et al.*, 2000), management (Johanson *et al.*, 2001a, 2001b; Roberts, 1998, 1999; Sánchez *et al.*, 2000, Meritum, 2002), disclosure (Mouritsen *et al.*, 2001a, 2001b), capital markets (Lev and Zarowin, 1999).

As stated by Petty and Guthrie (2000), the research focus ranges from the need to better understand intellectual capital (Brooking, 1996; Sveiby, 1998), and adopt a general accepted classification (Stolowy and Gröjer, 2000) to a range of different methods and tools to visualize and measure (notably, the Balanced Scorecard of Kaplan and Norton, 1992; the intellectual capital asset monitor by Sveiby, the navigator by Edvinsson and Malone, 1997) and to create standards for management and reporting (Meritum, 2002; the Danish Trade and Industry Development Council, 1997).

Different initiatives have been undertaken by a variety of international actors and institutions, such as the OECD, the European Union, international accounting standard setting bodies, entrepreneurial and industry associations as well as by individual firms and researchers (Cañibano and Sánchez, 2003). Notably the OECD played a key role in being the first international organization to draw the attention to the relevance of intangibles at business and national economic level by issuing a range of reports and statistical reviews (OECD, 1997a, 1997b and 1999). In a follow-up activity, the OECD sponsored a series of international conferences that triggered research and policy interest in the issue (Helsinki in 1995, Amsterdam in June 1999 and Madrid in 2003) and acted as the starting point for various national studies and experiments, many of which are covered some way or another in this Special Issue. Up to this day, the OECD has continued its support, for example,

with studies on knowledge management practices (Foray, 2002) and intangibles at macro level (Vickery, 2000).

More recently, the European Union has started to acknowledge the increasing role of intellectual capital and intangibles in the economy and for business organizations. For instance, a High-Level Expert Group on Intangibles was created to discuss the implications of the growing importance of intangibles while a number of EU-funded projects were launched (Meritum, E*know-net, Prism, European Study on intangibles). In March 2001, the European Commission organized jointly with the Swedish Ministry of Industry and Trade a conference in Växjö (Sweden) focusing on the specific problems of SMEs and intangibles. In November 2002, the initiatives by the EU and the OECD seemed to merge as the EU funded an international conference on intangibles in Madrid, supported by the OECD and the Spanish Ministries of Economy and of Science and Technology.

The mobilization by the international organizations has moved in parallel with a large number of initiatives in the business sector, both at industry (Roberts, 2000) and at firm level. The pioneering experiments in the management and reporting of intellectual capital continue to be found with Scandinavian firms – most well known models tend to come from Sweden or Denmark. However, during the last decade, there has been a major shift in the way organizations think about intellectual capital (Cañibano and Sánchez, 2003). No longer is there a need to demonstrate the impact of intellectual capital on the organization, as firms and other institutions are well aware of it. However, there is still a need for a common theoretical framework as well as a lack of tools and models to help firms develop their own customized system for the management and reporting of intellectual capital.

With regard to (the absence of) a common theoretical framework, it has been argued that the concept of intangibles is actually an adjective that combines with different concepts such as assets, activities and resources (Meritum, 2002). Intangibles are generally defined as “non-monetary sources of probable future economic profits, lacking financial substance (...) that may or may not be sold separately from other corporate assets”. Intangibles, thus defined, fall under three categories: human capital, relational capital and structural capital.

It is not the stock of intangibles that creates value for the organization, but the connectivity between the three different sets of intangibles of the organization (Roberts, 2000). Connectivity is considered to determine the intellectual capital of the firm; that is, the value that emerges from the capability to combine the firm’s human, relational and structural capital categories.

The accounting profession coined the term intangible and it is in this field where it is being used most intensively. In contrast, the term intellectual capital was first used in the Human Resource field, but its use is now spreading rapidly in other disciplines. However, and as we postulate throughout this paper, both terms, intangibles and intellectual capital, continue to be vague and meaningless for those firms that have never worked with intellectual capital. It is only after they start working with these concepts that a meaning arises for the firm; and accounting systems play an important role in this sense-making process.

1.2. IC AND ACCOUNTING: A MUTUALLY INFLUENCING RELATIONSHIP

Introducing new management tools into the firm is always a complex and painful process. Old processes tend to disappear while new models, tools but also concepts tend to impregnate the organization's routines. This is also the case with the introduction of an intellectual capital management system (ICMS hereunder). New concepts such as "invisible assets", "intellectual capital" or "intangibles" invade the management procedures, and they only adopt a meaning when contrasted to previously existing routines, concepts or models. In this contrasting process, both the past and the present mutually influence each other. Management accounting begins to adopt a new language, reinventing itself in the process, while the concept of intellectual capital is influenced in turn by the existing accounting routines and procedural peculiarities of the firm.

Accountants are intimately familiar with the registration, manipulation and use of information whereby financial numbers and information are two sides of the same coin for the profession. Equally familiar is the deployment of financial information by means of accounting statements, internal reports and analytical studies. The familiarity with handling financial information and the toolkit surrounding it has also been understood to provide a view on the state of (economic) being of the firm – financial numbers provide a true and fair view of the firm, and they paint a transparent picture of what the firm has been doing. In a sense, the financial numbers tell us what we know about a particular firm: its actions, its reasons and purposes, and the outcomes of its behaviours. That is, financial information and its related toolbox are already a form of knowledge management.

By practicing accounting, we are codifying business realities into an established understanding of economic wealth. Accounting provides meaning and has created a manageable situation where decisions can be brought to bear on these same costs, assets or income numbers.

However, recognizing the message that there seem to be noncodified categories of wealth dormant in the organization (Sveiby, 1997; Stewart, 1997; O'Reilly and

Pfeffer, 2000), an effort to measure and codify these “new” sources has been underway for some time. This challenge has been taken up in full fervour by the accounting community and is evidenced by the much used and timeworn slogan “what gets measured, gets done”. If not by measurement, how else can one know what one knows? Consider, for example, the claims attributed to the balanced scorecard (or its derivatives such as the Skandia Navigator) that intellectual capital can be measured by means of a set of non-financial indicators. Using the appropriate measurements suggests that new meanings can be infused into the organization, and an awareness and subsequent action agenda on Intellectual Capital can be constructed. However, the same measurement processes used to bring these noncodified categories ‘under control’, i.e., into accounting space, also implicate a selection of what needs to be managed as a result (Jönsson and Solli, 1994). That is, a selection of what is meaningful and makes sense to do. For example, to account for intellectual capital such as employee skills or managerial experience, implies introducing the meaning of measurable resources, bringing employee skills to a similar level of meaning as, for example, machining capacity. Both can be measured and quantified, and management agendas such as Intellectual Capital can subsequently be brought to bear on them.

Stated crudely, if one measures more and “better” by starting to use non-financial indicators, Intellectual Capital will readily arrive.

In other words, taking the accounting angle for codifying business reality automatically implies using words, concepts and meanings that make sense in an accounting universe. And, more importantly, are recognizable for other accountants and related codifiers such as auditors – these words make sense for them.

But how about the uninitiated, the inexperienced and the ones that live in another universe of meaning?

Firms that have little or no accounting expertise within their ranks, such as small and medium sized enterprises (SMEs), do not recognize the words (codes) used. The concepts of intellectual capital are meaningless to them. Although attracted by the promises of better managerial decision-making and improved value creation, the terminology around intellectual capital trigger remarks such as “Intellectual Capital? We don’t have any intellectuals working here!” Or “Intellectual capital? That means people? Do I have start counting the inside of the brains of my people now?” Similarly, firms that do have an accounting function of some size and significance are equally puzzled. They have neither experience with the terminology nor the broader ideas, but they do have experience with (performance) measurement, ‘running the numbers’ and internal reporting. In a sense, that is even more dangerous because the misunderstanding will lead to a very hard to repress reflex to measure what is already available in the

measurement universe, i.e., to measure what can be measured. The Intellectual Capital effort derails into a more-of-the-same approach – the existing measurement routines are extended, and become more inclusive (Den Hertog and Roberts, 1992).

However, that does not mean that intellectual capital efforts are lost on SMEs, inexperienced organisations or hard-core industrial manufacturing firms. What it means is that the entry point needs to be carefully considered – instead of using accounting routines such as measurement and reporting, the “docking point” of introducing the IC concept into the organization needs to be locally customized, i.e., allow interpretation according to local standards and norms. This is more a matter of demonstrating by example than by design per sé. No translation of words is needed nor does the IC vocabulary need to be redesigned or reformatted by creating a large thesaurus of meanings for every concept. However, the existing library of concepts will need to be shown, but shown as concepts in action. That is, an extensive set of examples and situations that permit firms to almost literally see what IC means and what is in it for them from their own local reference point. An avalanche of examples and cases is suggested, using rich formats such as seminars by already experienced practitioners, examples of how IC was interpreted and implemented by different sorts of firms, and visits to firms where IC is being used. The avalanche of examples is putting the IC terminology in an application context – it does not provide IC information but provides IC knowledge.

For example, if a firm’s reference point is a world of machining hardware (utilization, up/down time, maintenance, replacement, operating etc.), then intellectual capital becomes meaningful if it can be literally seen to work in a manufacturing environment, applying terms as human capital to a context of machine operators that mentor one or two apprentices.

Providing these conditions of seeing and recognizing, of putting meaning into the words, is the task of pedagogical routines. This is the only design needed – a pedagogical set-up in which firms and individuals can actually observe for themselves what the words mean. The pedagogical routines clearly involve learning-by-example as well as learning-by-doing. In a sense, the pedagogical routines are based on a learning design towards implementation (Johanson *et al.*, 2001a; Royrvik and Bygdas, 2003).

The place of measurement routines and processes in an accounting sense (i.e., business monitoring, controlling and planning) depends on the preceding settlement and acceptance of the meaning of IC words and concepts. That is, the use of pedagogical routines.

It is important to note that pedagogical routines can also be the building block for subsequent learning tools, especially in situations where accounting is not an everyday activity or in situations where one wants to avoid that everything is measured, reported, registered and evaluated. In the latter case, pedagogical

routines are followed-up by specific pedagogical management tools, such as learning-on-the-job, mentoring, debriefing, value building, team work and group reporting - all promoting the practice of understanding and focusing on communication and learning (Manville and Ober, 2003; Wenger *et al.*, 2002; Yeung *et al.*, 1999).

3. THE RESEARCH APPROACH

3.1. RESEARCH QUESTION

Although the question on what Intellectual Capital means for inexperienced and uninitiated firms seems to be extremely relevant to understand the purpose of the ICMS, it is almost absent in all academic studies on ICMS. We suspect the reason behind this is that research approaches typically focus on HOW (how did the firm introduce the ICMS, what were the stages), WHY (objectives) and WHAT IMPACT (if any), while the questions of WHAT do you understand by intellectual capital and HOW was the concept introduced for the first time, are taken for granted.

Our story is about how we started with the first question (what) and ended up with the last one (how). The purpose of our paper is to analyze how firms with no previous experience with IC management implemented a system for the management of intangibles. In both countries, Spain and Norway, an action research approach was followed. Through the close collaboration with the firms, we were alerted to the complexity of introducing a new concept such as intellectual capital in the firm, and the relevance of the sense-making process for the final outcome of the ICMS. That is, we did not start out from a specific purpose and related research question on the sense-making and implementation of ICMS, but more or less found this out as part of exploring and moving forward while trying to co-implement an ICMS - our own knowledge enterprise was design-coupled to that of the firm's implementation process (Den Hertog, 2002).

3.2. THE FRAMEWORK: THE MERITUM PROJECT AND THE SELECTION OF CASES. WHY NORWAY AND SPAIN?

The analysis of how the Norwegian and Spanish firms are managing and accounting for intangibles has to be seen within the general framework of the MERITUM Project¹. The project *a priori* envisaged researching how best practice

¹ MERITUM (Measuring Intangibles to Understand and Improve Innovation Management) is a Research Project sponsored by the TSER Program of the European Commission. The following six countries are involved: Denmark, Finland, France, Norway, Spain (co-coordinator) and Sweden, for the period November 1998 till April 2001. More information available on <http://www.kunne.no/meritum>

firms were managing and disclosing information on intangibles. The objective was to learn from firms who had some tradition or previous experience in identifying, managing, measuring or reporting on intangibles. This was clearly possible in countries such as Sweden, Denmark and Finland where there was a number of firms already experimenting with Intellectual Capital, either through the use of Human Resource Costing and Accounting practices and disclosures (Sweden, Finland) or through the timely initiation of a national Intellectual Capital reporting project (Denmark; Mouritsen *et al.*, 2001). However, in the cases of both Norway and Spain, the number of experienced firms was close to non-existent. As a result, explicit attention needed to be paid to the design of IC's introduction and deployment at firm level.

The analysed firms were non-randomly selected both in Spain and in Norway. They shared a characteristic of no previous experience but, at minimum, had a strong interest in the topic. The main research question was not *how* the firm was measuring, managing or reporting on intangibles - as was the case with experienced firms - but *how* the approached firms *were going to start* managing intangibles; and, over time, how they developed their methods of managing IC. The two visions (that of the experienced firms and that of the non-experienced firms) are, therefore, complementary. In this paper, we will focus on the non-experienced firms.

The commonality in the Spanish and the Norwegian cases is based on the same starting level of non-experience but, obviously, differences existed in the base positions of both national trajectories of developing their experience. These differential base positions refer to (1) the initial conceptual framework and (2) in the set of firms involved.

(1) Initial conceptual framework & research questions

In the Spanish trajectory, the initial conceptual framework was not fully specified upfront. The main research question was how an ICMS is introduced in non-experienced firms. The initial conceptual framework was developed using a literature review (Cañibano *et al.*, 2000) and the analysis of the practice in several firms (Danish Trade and Industry Development Council, 1997; BBV, 1998; Finanzia BBV, 1997; Club Intellect, 1997). It was founded on the accounting definition of intangibles, including traditional intangibles (R&D, training, goodwill) as well as more unorthodox intangibles (such as skills). It included the notion that intellectual capital could be seen as a static phenomenon or as a dynamic phenomenon. Static here meaning intangible resources or assets in a broad sense (Hall, 1992) such as skills, capabilities or intellectual property rights that can be measured at any given point in time. Dynamic being those activities that might create, increase or acquire those intangible resources. Intellectual capital was conceptualised as the

combination of Human Capital, Relational Capital and Structural Capital. Human Capital was defined as the knowledge embedded in the employees; Structural capital as the knowledge embedded in the organization in the form of routines, culture or processes; and Relational capital was defined as all the resources linked with the external relationships of the firm, including the perception the stakeholders hold about the firm (Sánchez *et al*, 2000a). With this initial conceptual framework, an ICMS was related to the identification, measurement and reporting of information on intangibles.

The Norwegian trajectory started out from the guiding question - how can Intellectual Capital be used for increased value creation in the media industry? That is, from the very start, the interest was not in managing, measuring or reporting IC *per se*, but in making it work in terms of value creation. This had two consequences: first, it could answer the "what is in it for me?"- question asked at firm level and, second, it allowed for a simple conceptual framework around IC that acted to make (a preliminary) sense out of the concept.

The conceptual framework was based on the three composite elements of IC - Human Capital, Relational Capital and Structural Capital (Stewart, 1997). It postulates a sequential line of argument; in order to increase value, a firm's IC that originates from the knowledge carried by the individuals composing the Human Capital needs to be shared (related) internally and externally by the members of the firm. A firm's value creation, thus, equals a knowledge production function located in its Relational Capital, and is centred around the firm's ability to establish connectivity, i.e., relatedness, between members internal and external to the firm and between members and connectivity systems. The latter take the shape of management routines, systems and actions that make up the Structural Capital of a firm's IC (Roberts, 1999; 2000). A key element in this normative framework is the importance of Relational Capital and its concept of connectivity; it represents knowledge sharing across existing organizational boundaries with whoever holds that knowledge. Knowledge was widely defined as all competences, skills, experience and insights people hold, and not restricted to formal education nor training. It encompasses the tacit aspects of human insight and the 'mental maps' that long-standing industry and work experience provide.

(2) Set of firms

In the case of Spain, a total of 10 firms were analysed, 8 of which were large firms with more than 150 employees and 2 were medium-sized firms (51 to 250 employees). They were covering a wide range of industries, from banking, electrical supply, industrial electronics, insurance, research institutions and telecommunication services (Chaminade, 1999). Only one of the firms, a bank, had

more than 3-years experience in terms of accounting, managing and reporting for intangibles.

In the Norwegian trajectory, the research project was sector-based, involving the sector organizations of the printing, newspaper and magazine industries, and was funded by the Norwegian Research Council (NFR). The project involved 31 firms in two sets of interactions. All firms involved were Small and Medium-sized Enterprises (SMEs), ranging in size from 12 employees to 248 employees and none of them are listed on the stock exchange.

3.3. METHODOLOGY

Both the Spanish and the Norwegian trajectory were action-research based. A grounded theory (Straus and Corbin, 1990) approach was used to generate a set of insights that were subsequently grown through an iterative process of reflection and action.

In the Spanish trajectory the project was divided into two phases. During the first phase, three case studies were conducted in parallel, but with strong interactions between them, as illustrated by Figure 1. After completion of the case studies, a local theory on how firms manage their intangibles was developed (Sánchez *et al*, 2000a). The validity of this theory was then tested within a different sample of firms, and a final theory developed (cf. Yin's concept of analytical verification, 1994).

[insert figure 1 about here]

In the Norwegian trajectory, the project on Intellectual Capital was also divided into two stages each of which containing a different set of firms. The first stage focused on mapping the experience and understanding of IC by the firms that had originally signed up for the project (November 1999-March 2000), while the second stage focused on developing the IC for a new set of firms (March 2000-August 2001). The mapping stage involved 21 firms while the development stage involved 15 firms. Of these 15 firms, 5 were involved in the earlier mapping stage and 10 were newcomers.

[insert figure 2 about here]

The Spanish and the Norwegian firms involved in implementing Intellectual Capital used different trajectories in their approach, the Spanish one being based on an accumulative and iterative development of conceptual insight and accompanying vocabulary, and the Norwegian one based upon a more formalized and normative approach. This can be partly attributed to the way the two research groups worked together with the companies, and to the funding arrangements in place.

The Norwegian research group used a formal project structure that was closely tied to the NFR-funding and the cooperation with the sector organizations. Given the funding and project description requirements, there was a far greater pressure than in the Spanish case to specify upfront what the normative starting point and the expected outcomes (“deliverables”) were. This implies that the lessons learned from working with Intellectual Capital are already to a certain extent predetermined by the funding arrangement; the freedom to learn and acquire insight along the way, understood as ‘freedom to deviate from plan’, is restricted by the use of formal project scheduling and budgeting (Den Hertog, 2002). The latter implicitly requires a stronger normative positioning in order to pre-justify activities and expenses.

4. FINDINGS - EXPERIENCES IN SPAIN AND NORWAY

As previously stated, the purpose of both projects was to get to know how inexperienced firms start working with intellectual capital. Although the trajectory in both countries was different, we shared the same problematic when addressing the firms for the first time: *Working with IC in firms not familiar with the concept required a continuous effort to explain the concept and to continuously put its abstract meaning into an operational context.*

The use of “early practice” examples, such as the Skandia Navigator or Dow Chemical’s management of its patent portfolio, and the exchange of indicator examples among firms showed the need to operationalize the concept, and generate clues about what and how IC could be made functional.

As a consequence, both the Spanish and the Norwegian trajectories had to focus strongly on building awareness and developing experiments with Intellectual Capital. In this sense-making process, we discovered that the main entrance point into the firms and the preceding cognitive references made a difference in the outcome derived from the implementation of an ICMS.

The underlying idea in the Spanish case, was that financial accounting tools could not capture the real value of the firm. Therefore, new tools to identify, measure and report on intangibles were needed. In the Spanish case - where the accounting perspective was strong and acted as main entrance point - IC was interpreted as a functional *identification and measurement* issue to support IC reporting to external parties and internal management. The main objective of the whole IC project was to produce an Intellectual Capital Report. Consequently, these interpretations resulted in Intellectual Capital “making sense” for purposes of accounting and reporting and, to a lesser extent, for management. The implementation of an ICMS was a process of identifying the critical intangibles, finding the right indicators for each intangible and managing and then reporting them (Sánchez *et al*, 2001). The

ICMS was, therefore, seen as a tool to uncover and communicate the “hidden” value of the firm and focus the managerial actions.

The visualization and identification effort in the Spanish trajectory was considered part of an attempt to develop an indicator system, with indicators being considered the prime vehicle for identification and visualization. That is, to undertake a formalization and codification attempt for the sake of establishing managerial control, thus making the particular knowledge area enter into the existing accounting domain, with specific accountabilities and responsibilities.

In contrast, the Norwegian trajectory showed that IC can be used without the extensive financial accounting vocabulary. In effect, value creation became addressed as an issue around knowledge sharing, interaction and (codified) information exchange, with the closest accounting vocabulary being that of revenue management and performance indicators. The purpose here was to reinvent the organization, building new routines around knowledge-based value creation. Uncovering where and how in the firm value was created provided the insight on how to improve and change the firm’s routines. From an SME perspective, Intellectual Capital implementation focused strongly on the identification and visualization of value creating activities, including the areas and (groups of) people where these activities are located. These activity areas tend to be relatively less pronounced compared to larger firms that have a broader set of management and accounting routines, including a broader set of interaction and informing routines². Building these latter routines for SMEs is a prime IC development process, and one that we found to precede the creation of formal measurement and accounting routines.

Visualization and identification in that sense becomes an attempt to ‘make things clear’ and non-confusing (Hedberg and Jonsson, 1978), and constructing the governable person in the process (Miller and O’Leary, 1987). As a result, implementing Intellectual capital depends strongly on who is the first one starting to use the words and, consequentially, fills it in with a functional vocabulary and conceptual interpretation that sets the remains of the implementation trajectory.

In summary, in the Spanish firms, the accounting entrance point reduced the problem of managing intellectual capital to a matter of counting and accounting; on the other hand, the strategic entrance point of the Norwegian trajectory made it possible to use the ICMS as a transformation tool.

² A routine is defined as a commonly adopted treatment of an occurrence or phenomenon that is maintained over a period of time. For the purpose of this paper, routines are to be understood in the use made by Nelson and Winter (1982) in describing an evolutionary theory of the firm by means of its organizational capabilities and behavioral patterns, and used later by Grant (1996) and Johansson et al. (2001) in proposing decision-making routines for the knowledge-based firm.

4. CONCLUSIONS AND FUTURE WORK

Although the purpose of the work conducted in Norway and Spain was not to analyse the process through which non-experienced firms put meaning into the words intellectual capital and intellectual capital management, it has been a good platform to assess the difficulties of inexperienced firms dealing with the IC concepts for the very first time.

All firms needed to understand Intellectual Capital in the sense that they needed to develop an operationalization of the concept in answering “what is in it for me?” In that very early stage, the meaning of Intellectual Capital acquires a substance that defines its further use over time within the firm. That is, the educational route and implementation trajectory that each firm sets for itself is defined by the “docking point” of the word in a process of highly firm-specific sense making.

The results of our national projects point out a number of propositions for the introduction of intellectual capital management systems in inexperienced firms:

- **The entrance point determines the way the ICMS will develop in the firm:** As Davenport and Prusak (2000) point out, it matters to select the right anchor for the deployment of an IC project. Intellectual Capital projects depend strongly on where they enter the organization; who is the champion or sponsor of Intellectual Capital and “owns the word”? If that is the accountant or CFO, the educational route and implementation trajectory will evolve as an accounting problem and specify itself in terms of valuation and measurement problems. The original launch of the Intellectual Capital definition in the USA (Stewart, 1997) as the difference between a firm’s market value and book value has reinforced this “conceptual ownership” by the finance & accounting function. The use of the word ‘capital’ has further confirmed the IC concept as a financial issue, and defined it as a quest for a new metric; one that captures the knowledge resource of the organization as if it were similar to the financial resource, with financial stewardship as first reference point. One can speculate whether this faith also awaits the accounting research community when IC transfigures further into typical accounting issues of valuation and accounting principles, i.e., whether a mono-disciplinary entrance leads to functional lock-in of the concept, and reduces its potential for change and novel management actions.

- **Pedagogy matters:** Conceiving Intellectual Capital as an educational effort, and not singularly as an accounting issue, shows itself in the continuous struggle with finding the adequate vocabulary and phrasings of the concept. Both in the Spanish and Norwegian trajectories, the firms expressed - and continue to express till this day - their unease with the words used to explain Intellectual capital. Translations into ‘intangibles’ or ‘competence capital’ or ‘integration capital’ were much used, but frequently abandoned. The appeal for management of trying to address the ‘hidden resources’ of the firm was overwhelming, but the phrasing and

terminology required for doing so, was highly problematic. Creating a firm-specific syntax, somewhat like the tree-type breakdown of intellectual capital categories used by Skandia *and for Skandia* (Edvinsson, 1997), is necessary in order to use the concept. With the word 'use' here meaning using the words for mobilization and visualization as well as for experimentation. The extension of the syntax with illustrations or pictures, in order to make it more encompassing and richer, is a logical next step to build up the local pedagogics of change.

- **Collective learning is a facilitator:** In both the Spanish and Norwegian cases, the fact that the two IC projects were multi-firm proved to be crucial. Firms could rely on each other's examples and exchange approaches on how to work with IC. The educational route that was taken was one of sharing and learning collectively, instead of doing it alone. The effectiveness of this educational approach is confirmed also in the Danish Intellectual Capital Statements project (Mouritsen *et al.*, 2001a and 2001b) and the Nordika and Frame projects (Jensen, 2001).
- **Internal managerial orientation is needed:** The development of Intellectual capital in both the Spanish and Norwegian trajectories also points out the importance of starting out from an internal, managerial orientation of Intellectual Capital. The firm firstly needs to make sense out of the term, internally, before it becomes useful externally. That does not preclude the use of IC for external disclosure; external disclosure itself can be used as a sense-making mechanism for the firm. By engaging in a reporting and disclosure exercise, the firm is discovering for itself what IC means and how it can be put to use and turned into specific managerial action (cf. Johanson *et al.*, 2001).

However, our comparative analysis of the Spanish and Norwegian trajectories overlooks a number of issues that might have relevance for the interpretation of how Intellectual Capital was implemented. First of all, the role of culture was ignored, both of national culture and of organizational culture. For the purpose of this paper, we assume that organizational culture is embedded in the tacit routines of working, interacting and exchanging. We do not consider these institutional theoretical aspects in so far that some of these tacit routines might have national cultural roots. A further exploration of the concept of routines in implementing Intellectual Capital provides a relevant topic for future research.

Second, the firms involved in both the Spanish and Norwegian trajectories are non-randomly selected and based on a qualitative case analysis. Their comparison is based on how the concept played out in different ways, and suggests the importance of 'early terminology' in establishing an interpretative context and its subsequent choice of implementation and concretisation of methods, tools and trajectories. We do not consider in this paper whether the statement that 'words matter' can be quantitatively validated. We are conscious that Intellectual Capital is not an established phenomenon and that various opinions on its fad & fashion

status are opportune. However, once there is an accumulated set of firms that have a stable set of deployed IC practices, a verification of its claim of increasing value creation needs to be undertaken. This will necessarily imply gathering financial data from both large and small, listed firms and non-listed firms and is, once again, a relevant area for future research.

Third, we did not consider framing our experiences into an existing theoretical framework, and then use the latter to formulate hypotheses. Although references are made to Evolutionary Theory, the Knowledge-Based Theory of the Firm, and (implicitly) to the Resource-Based Theory of the Firm, both the Spanish and the Norwegian IC trajectories have developed their own local theories, roughly based on the available Intellectual Capital literature at that time. Hence, there has been a conceptual point of departure, be it a skimpy one. But our interpretation of Intellectual Capital and its implementation has been relatively open, with the process of acquiring insight and formulating working hypotheses being iterative and interpretative. A deliberate interpretation of Intellectual Capital from an *a priori* and established theoretical framework remains a relevant direction for future research.

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6. REFERENCES

Amir, E. and Lev, B. (1996) 'Value-relevance of non-financial information: the wireless communications industry', *Journal of Accounting and Economics*, 22: 3-30.

Aboody, D. and Lev, B. (1998) 'The value relevance of intangibles: the case of software capitalization', *Journal of Accounting Research*, 36 (Suppl.): 161-191.

Bankinter (1998) *Annual Report 1998*. Spain: Madrid.

BBV (1998) *Annual Report 1998*. Spain: Madrid.

Blair, M. and Wallman, S. (2001) *Unseen Wealth*. Report from the Brookings Task Force on Intangibles.

Brooking, A. (1996) *Intellectual Capital*. London: International Thomson Business Press.

Cañibano, L., García-Ayuso, M. and Sánchez, M.P. (2000) 'Accounting for Intangibles: A Literature Review', *Journal of Accounting Literature*, 19: 102-130.

Cañibano, L. and Sánchez, P. (2003) 'Measuring, managing and reporting on intangibles: state of the art'. Work in Progress. Autonomous University of Madrid.

Chaminade, C. (1999) 'Case Study: The Telecom Service Firm', Internal Report, IADE, Autonomous University of Madrid.

Chaminade, C. and Roberts, H. (2002) 'Social capital as a mechanisms: connecting knowledge within and across firms'. Paper presented at the International Conference on Organisational Knowledge, Learning and Capabilities (OKLC), Athens, Greece.

Club Intelect (1997) *Proyecto Intelect. Medición del Capital Intelectual* [Intellect Project. Intellectual Capital Measurement], Madrid.

Danish Trade and Industry Development Council (1997) *Intellectual Capital Accounts. Reporting and Managing Intellectual Capital*. Copenhagen: Danish Agency for Trade and Development (<http://www.efs.dk/icaccounts>)

Den Hertog, J.F. (2002) 'Learning by Doing Organizational Research: Inside views from a Dutch nephew', Research Memorandum 2002-033, Maastricht Economic Research institute on Innovation and Technology (MERIT), <http://www.merit.unimaas.nl>.

- Den Hertog, J.F. and Roberts, H.J.E. (1992) 'Learning Strategies for Management Accounting in Unprogrammable Contexts', *Accounting, Management and Information Technologies*, 2(3): 165-182.
- Davenport, T. and Prusak, L. (2000) *Working knowledge*. Boston, MA: Harvard Business School Press.
- Edvinsson, L. (1997) 'Developing Intellectual Capital at Skandia', *Long Range Planning*, 30(3): 266-373.
- Edvinsson, L. and Malone, M. (1997) *Intellectual capital: realising your company's true value by finding its hidden brainpower*. New York, NY: Harper Collins.
- Finanzia BBV (1997) *Annual Report 1997*. Spain: Madrid.
- Foray, D. (2002) 'Results from the OECD study on intangibles Based on OECD (2002) COM/CERI/DSTI (2002) 65. Paper presented at the international conference "The Transparent Enterprise. The value of intangibles" . Madrid, Spain.
- Grant, R.M. (1996) 'Toward a Knowledge-Based Theory of the Firm', *Strategic Management Journal*, 17: 109-122.
- Gröjer, J.E. and Johanson, U. (1999) 'Human Resource Costing and Accounting - Time for reporting regulation'. School of Business, Stockholm University.
- Hall, R. (1992) 'The Strategic Analysis of Intangible Resources', *Strategic Management Journal*, 13:135-144.
- Hedberg, B. and S. Jonsson (1978) 'Designing semi-confusing information systems for organizations in changing environments', *Accounting, Organizations and Society*, 3(1): 47-64.
- Jensen, H. (2001) 'Intellectual Capital', Nordisk Industrifond [Nordic Industrial Fund], Oslo.
- Johanson, U., Mårtensson, M. and Skoog, M. (2001a) 'Measuring to Understand Intangible Performance Drivers', *European Accounting Review*, 10(3): 1-31.
- Johanson, U., Mårtensson, M. and Skoog, M. (2001b) 'Mobilizing Change through the Management Control of Intangibles', *Accounting, Organizations and Society*, 26 (7/8): 715-33.
- Jonsson, S. and Solli, R. (1994) 'The Professional Dialogue and Finances in a Caring Setting', *Management Accounting Research*, 4(4): 301-20.
- Kaplan, S and Norton, D. (1992) *The Balanced Scorecard*, Boston, MA: Harvard Business School Press.

Lev, B. and Zarowin, P. (1999) 'The boundaries of financial reporting and how to extend them', *Journal of Accounting Research*, 37: 353-386.

Liyanage S., Johanson, U, and Hansson, B. (2002) 'Management of Knowledge and Intellectual Capital'. Editorial in Special Issue of *Singapore Management Review*, 24(3): 1-6.

Manville, B. and Ober, J. (2003), 'Beyond Empowerment: building a company of citizens', *Harvard Business Review*, 81(1): 48-55.

MERITUM (2002) *Guidelines for Managing and Reporting on Intangibles (Intellectual Capital Report)*. Madrid: Fundacion Airtel.

Miller, P. and O'Leary, T. (1987) 'Accounting and the Construction of the Governable Person', *Accounting, Organizations and Society*, 12: 235-65.

Mouritsen, J., Larsen, H.T. and Bukh, P.N.D. (2001) 'Intellectual capital and the 'Capable Firm': Narrating, Visualising and Numbering for Managing Knowledge', *Accounting, Organizations and Society*, 26 (7/8): 735-62.

Mouritsen, J., Larsen, H.T. and Bukh, P.N.D. (2001b) *Guideline for Intellectual Capital Statements - A Key to Knowledge Management*, Copenhagen: Danish Agency for Trade and Development (<http://www.efs.dk/icaccounts>)

Nelson, R.R. and Winter, S.G. (1983) *An Evolutionary Theory of Economic Change*. Cambridge: the Belknap Press of the Harvard University Press.

OECD (1996) *Measuring what people know: Human capital accounting for the knowledge economy*. Paris, France.

OECD (1997a) *Measuring performance in the age of intangibles. Enterprise value in the knowledge economy*. Proceedings of the Helsinki conference in 1996 organised by the OECD and Ernst & Young/Boston, Paris, France.

OECD (1997b) *Changing Workplace Strategies: Achieving Better Outcomes for Enterprises, Workers and Society*. Report on the International Conference in 1996 organised by the OECD and the Government of Canada.

OECD (1997c) *Industrial Competitiveness in the Knowledge-Based Economy. The New Role of Governments*. Proceedings of the Stockholm conference in 1997, Paris, France.

OECD (1999) *Measuring and Reporting Intellectual Capital: Experience, Issues and Prospects*. Amsterdam, June. <http://www.oecd.org/dsti/sti/industry/indcomp/act/amsconf/symposium.htm>.

O'Reilly, C.A. and Pfeffer, J. (2000) *Hidden Value: how great companies achieve extraordinary results with ordinary people*, Boston, MA: Harvard Business School Press.

Petty, R. and Guthrie, J. (2000) 'Intellectual capital. Literature Review', *Journal of Intellectual Capital*, 1(2): 155-76.

Roberts, H. (1998) 'Management Accounting and Control Systems in the Knowledge-intensive Firm'. Paper presented at the 21st Annual Congress of the European Accounting Association, Antwerp, Belgium.

Roberts, H. (1999) 'The Control of Intangibles in the Knowledge-intensive Firm'. Paper presented at the 22nd Annual Congress of the European Accounting Association, Bordeaux, France.

Roberts, H. and Berthling-Hanssen, P. (2000) 'Ready for Intellectual Capital? - A Case Study of 25 Firms in the Norwegian Printing, Newspaper and Magazine Industries'. Paper presented at the 23rd Annual Congress of the European Accounting Association, Munich, Germany.

Royrvik, E and Bygdas, A. (2003) 'Situating Support Systems: storytelling and knowledge enabling in distributed organizational environments', *Journal of Internet and Enterprise Management*, forthcoming 2003.

Saint-Onge, H. (1996) 'Tacit Knowledge: The Key to the Strategic Alignment of Intellectual Capital', *Strategy & Leadership*. March/April: 10-14.

Sánchez, M.P., Chaminade, C. and Escobar, C.G. (1999) 'En Busca de una Teoría sobre la Medición y Gestión de los Intangibles en la Empresa: Una Aproximación Metodológica' [In Search of a Theory of the Measurement and Management of Intangibles: A Methodological Approach], *Ekonomiaz*, 45:189-213.

Sánchez, M.P., Chaminade, C. and Olea, M. (2000a) 'Management of Intangibles: An Attempt to Build a Theory', *Journal of Intellectual Capital*, 1 (4): 312-327.

Sánchez, M.P., Cañibano, L., Chaminade, C. and Olea, M. (2000b) 'Best Practices in the Measurement and Management of Intangibles. Results of Spanish Case Studies'. Paper presented at the 4th International Conference on Technology Policy and Innovation, Curitiba, Brazil.

Spender, J-C. (1996) 'Making Knowledge the Basis of a Dynamic Theory of the Firm' *Strategic Management Journal*, 17: 45-62.

Sveiby, K.E. (1997) *The New Organisational Wealth: Managing and Measuring Knowledge based Assets*, San Francisco: Berrett-Koehler.

Stewart, T. (1997) *Intellectual Capital*, New York: Doubleday/Currency.

Straus, A. and Corbin, J. (1990) *Basics of Qualitative Research – grounded theory procedures and techniques*. Newbury Park: Sage Publications.

Stolowy, H. and Gröjer, J.E. (eds) (2000) *Classification of Intangibles*. CR 712. Jouy-en Josas: Groupe HEC.

Vickery, G. (2000) 'Measuring the knowledge based economy'. Paper presented at the Meritum final workshop. Madrid, SPAIN.

Wenger, E., McDermott, R. and Snyder, W.M. (2002) *Cultivating Communities of Practice: a guide to managing knowledge*, Boston, MA: Harvard Business School Press.

Yeung, A.K., Ulrich, D.O., Nasson, S.W. and von Glinow, M-A. (1999) *Organizational learning capability: generating and generalizing ideas with impact*, Oxford: Oxford University Press.

Yin, R. (1994) *Case Study Research. Design and Methods*. Newbury Park: Sage Publications.