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Intellectual capital disclosure payback

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Abstract

Purpose – The purpose of this paper is to propose an integrated framework for intellectual capital disclosure.

Design/methodology/approach – The measure, manage and report intellectual capital (MMRIC) methodology is a six-step process that will enable firms to more accurately describe their intangible assets.

Findings – The proposed step-by-step process also complements the exploration-exploitation tension that is highlighted in the knowledge management literature.

Research limitations/implications – This paper provides academic researchers with a comprehensive framework that can be utilized for future empirical studies related to intellectual capital disclosure.

Practical implications – The MMRIC process is a very useful tool for practitioners in that it provides a sequential system that can be followed for intellectual capital disclosure.

Social implications – Society at large benefits when corporate entities help to reduce risk and volatile market fluctuations by reducing information asymmetry with more comprehensive reporting.

Originality/value – This paper provides an initial theoretical framework that has been developed by integrating the extant literature on intellectual capital disclosure.

Keywords Intellectual capital, Intangible assets

Paper type Research paper

There is a growing body of literature that focuses on the valuation and reporting of intangible assets such as intellectual capital (IC) (Cañibano *et al.*, 2000; Guthrie and Petty, 2000; Bontis, 2001; Brennan, 2001; Pike *et al.*, 2002; April and Bosma, 2003; Bontis, 2003; Bozzolan, 2003; Kaufmann and Schneider, 2004; Ittner and Larcker, 1998; Marr, 2003; Mouritsen and Bukh, 2003; Abeysekera and Guthrie, 2005; Abeysekera, 2006; Ax and Marton, 2008; Fijałkowska, 2008; Orens *et al.*, 2009). For the purposes of this particular research paper, IC is considered to be an intangible asset following the work of Sveiby, 1997; Cañibano *et al.*, 2000; Stewart, 1997; Sánchez *et al.*, 2000; Caddy *et al.*, 2001; Sveiby, 2001b; Winter and Szulanski, 2002. Intangible assets are non-monetary assets, that do not have a physical state (Reinhardt *et al.*, 2003).

Still, many authors continue to debate about several models (Bontis, 1998; 2001, Edvinsson and Sullivan, 1996, Roos *et al.*, 1997, Reinhardt *et al.*, 2003) and IC terminology (Petrash, 1996; Saint-Onge, 1996; Lynn, 1998; Sánchez *et al.*, 2000; Bart, 2001; Bontis, 2002d; McElroy, 2002; Wexler, 2002). The general pattern is to present description lists and inventory templates from several practitioners and organizations, despite the real and actual practical use of such tools. However, recent publications



have highlighted the existing market benefits of reporting IC (Edvinsson, 1997; van der Meer-Kooistra and Zijlstra, 2001; Meritum Project, 2002; Kremp and Mairesse, 2002; Mouritsen, 2002; Peña, 2002; Marr, 2003; Mouritsen and Bukh, 2003; Systematic, 2004; Abdolmohammadi, 2005; Sonnier *et al.*, 2007; Curado, 2008; Bontis and Serenko, 2009).

Nevertheless, an unanswered question remains: how does IC disclosure pay back? The primary goal of this research study is to answer this question. A proposal is made for the measure, manage and report of intellectual capital: the (MMRIC) framework. Its application begins with choosing the proper measurement system and finishes with disclosing it through a valid and consistent reporting system.

The research question will be answered following the methodological approach of comparative analysis and empirical inductionism of grounded theory (Glaser and Strauss, 1967, particularly pp. 23-4, 31-43). Based upon substantial theory review, intangible resources will be described, and grouped together in categories, offering a complete categorical structure of intangible resources. Simultaneously, using logical deductionism, a framework to measure, manage and report IC will be deducted and present in the article.

Theoretical background

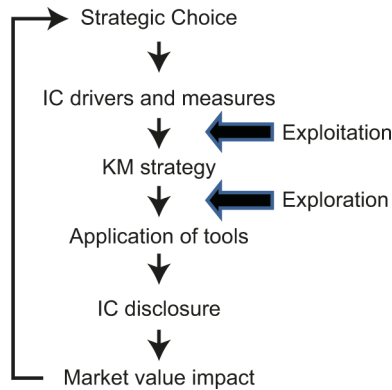
The knowledge based-view of the firm (KBV) considers knowledge to be the most important strategic resource (De Carolis, 2002). This is largely accepted by many authors (Grant, 1996a; Hoskisson *et al.*, 1999; Sveiby, 2001; Bontis, 2002; De Carolis, 2002; Huizing and Bouman, 2002; Balogun and Jenkins, 2003). As extension of the resource-based view of the firm, KBV represents a more appropriate perspective within the knowledge era (Drucker, 1993; Sirois, 1999; Stewart, 1997; Garud and Kumaraswamy, 2002; Grant, 2002; Guthrie, 2001; Mathews, 2003). In this context, IC assets are considered critical (Bontis *et al.*, 1999; Petrick *et al.*, 1999; Bontis *et al.*, 2000; Eustace, 2000; Barney, 2001; Hitt *et al.*, 2001; Grant, 2002; Bontis and Fitz-Enz, 2002; Mathews, 2003; Bontis, 2004).

The extant literature on KBV agrees that the economic change of manufacturing-based production to information-based production created a revaluation of firms and their workers. Increasingly we find knowledge workers at the core of organization functions (e.g. concept and technology designers, as well as finance and management people) (Curado and Bontis, 2006). Following Nonaka's (1991), original vision several authors have subsequently conceptualized the knowledge-based organisation (Blackler, 2002), knowledge-based advantage (McEvily and Chakravarthy, 2002) and the recognition that non-observable factors have an impact on firm performance and may even turn out to be the main determinants of firm performance (Dess *et al.*, 1995). The following sections provide an explanation for the MMRIC framework (Figure 1).

Step 1: Strategic choice

Increasing competitive dynamics; the globalization of markets; the accelerated level of technological advancement, and the growing significance of knowledge-intensive processes have all led to changes in the corporate process of value creation. Intangible assets have become an important source of enterprise value and firm wealth. The knowledge intensive firm represents a novel kind of organization where knowledge is the key resource and human capital is highly qualified. These organizations are loaded

Figure 1.
Measuring, Managing and
Reporting Intellectual
Capital (MMRIC)
framework



with talent and their critical resource-base increasingly consists of knowledge-based assets. At some point in time, top management will have to face the choice of either adopting or rejecting the knowledge-based perspective. In order to help the former and try to convert the latter, this study proposes a framework to implement a complete strategic approach to knowledge within the firm.

Relatively small firms typically focus on individual-level knowledge and intuitively explore to get the most out of it. On the other hand, relatively large corporations tend to focus on explicit documentation and pursue processes of exploitation. Either option is acceptable and has proved to work. However, each one of them presents a strategic choice that top management exercises on a daily basis through routines and decision making processes. Applying the MIC matrix proves to be very successful in these cases (Curado and Bontis, 2007).

According to Jarboe (2005), information system measurements can and should be part of business reporting. Furthermore, the reporting of performance measures and metrics of intangibles can be included in a separate section of the financial statements and the report can contain a value-creation model (Rodgers, 2007). Including knowledge-based assets alongside traditional assets as prescribed by a regulatory body allows investors and creditors to assess whether the knowledge-based assets' valuations are increasing or decreasing over time when compared with other traditional assets. Following Rodgers (2007), the measurement of employees' commitment, energy, and imagination can also drive innovation and deliver outstanding service as an important value creation indicator.

Step 2: IC drivers and measures

Stewart (1994) described IC as intellectual material that has been formalized, captured and leveraged to produce higher value assets. Edvinsson (1997) defined IC as the possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provide a competitive edge in the market. His definition was expanded by Miller (1999) to include the organization's relationships and community influence. This definition was further supported by Roos (2001) when he included both internal as well as external organizational relationships. Based on these definitions various conceptualizations of IC have developed over the years. Ultimately, there are three significant components that have been identified in the

literature: human capital, structural capital and relational capital (Brooking, 1996; Edvinsson, 1997; Stewart, 1997; Sveiby, 1997; Bontis, 1998; Saint-Onge, 1996; Sullivan, 1998; see Table I).

Human capital is typically recognized as a firm's most valuable asset as it underlies the organization's capability to make decisions and allocate resources. This enables human capital to become a source of innovation and strategic renewal (Bontis, 1998). Thus, human capital through its capabilities and expertise has value (Wriston, 1992; Stevenson, 2001). Human capital encompasses all individual capabilities, knowledge, skill and experience of an organization's employees and managers (Edvinsson and Malone, 1997). It is defined as the knowledge that each individual has and generates (Petrash, 1996). It is important because it is the source of innovation and strategic renewal (Bontis *et al.*, 1999; Curado, 2008). Human capital is related to employee competencies. It includes employee know-how, education, work-related knowledge and work-related experience. It is also influenced by other characteristics such as average age and turnover (Bozzolan, 2003).

Structural capital deals with the mechanisms and structures of the organization that can help support employees in their quest for optimum intellectual performance (Bontis, 1998). This includes databases, organizational charts, processes, manuals, strategies, routines and anything whose value to the company is higher than its material value (Roos *et al.*, 1997). Structural capital arises from processes and organizational value, reflecting the external and internal focuses of the company, plus renewal and development for the future (Bontis *et al.*, 2000). It embodies, empowers and supports human capital (Edvinsson, 1997). Structural capital consists, briefly, of the stock of knowledge that stays in the organization at the end of the day, after the employees go home. This means, it is the tacit and explicit knowledge that is contained in documents, routines and organizational culture, which remains in the organization after the individuals have left (Curado, 2008). Structural capital, or internal structure, includes intellectual property and infrastructure assets as sub-categories. Intellectual property consists of intellectual assets protected by law, like patents, copyrights and trademarks. Infrastructure assets consist of elements that can be acquired from the outside or be created from within the company (corporate culture, management processes, information systems, networking systems and research projects) (Bozzolan, 2003).

Relational capital is an asset that resides in the social relationships and networks among individuals, communities, or society (Burt, 1992; Tsai and Ghosal, 1998; Leana and Van Buren, 1999). It consists of internal social capital and external social capital. External social capital comprises connections outside the organization such as customer loyalty, supplier relations and competitive intelligence (Dzinkowski, 2000; Edvinsson and Malone, 1997; Stewart, 1997). It is mainly tacit and embedded in the long term relations established with authorities and other institutions (Sánchez *et al.*, 2000). It also includes brands, customers, customer loyalty, distribution channels, business alliances, joint research efforts, and financial contacts, licensing agreements and franchising agreements (Bozzolan, 2003).

These components respect the criteria set by Barney (1991). They are valuable; rare, not substitutable and costly to imitate. The following (see Table I) articulates the value drivers emanating from the classification of IC described above. Many of these drivers have been presented by various researchers (Hall, 1993; Guthrie and Petty, 2000; April and Bosma, 2003; Ricceri, 2004; Dzinkowski, 2000; Edvinsson and Malone, 1997; Stewart, 1997; Roos *et al.*, 1997).

Table I.
General relationships IC
components, drivers and
measures (Exploration v.
Exploitation-oriented)

IC drivers	Exploration measures	Exploitation measures
<i>Structural capital</i>		
Databases/archives	Statistics of database/archives inputs	Statistics of database/archives use
Research and development	R&D projects solutions creation	R&D projects solutions application
Telecommunication	Telecommunication use for innovation	Telecommunication use for sharing knowledge
Patents	Statistics of registered patents creation	Statistics of registered patents use
Innovation	Statistics of innovations occurrence	Statistics of innovations use
Leadership	Leadership index	Leadership index
Job descriptions/manuals	Inventory of manuals, codes and job descriptions	Inventory of manuals, codes and job descriptions
Intellectual property	Statistics of new intellectual property rights	Statistics of intellectual property rights use
Trademarks	Statistics of new trademarks	Statistics of trademarks use
Philosophy	Inventory of code of ethics	Inventory of code of ethics
Management process	Inventory of formalized exploration management processes	Inventory of formalized exploitation management processes
Corporate culture	Inventory of corporate culture creative values	Inventory of corporate culture replication values
Information systems	Inventory of management information systems	Inventory of management information systems
Knowledge sharing	Statistics of new knowledge sharing practices	Statistics of knowledge sharing practices use
Intranet	Statistics of new intranet use	Statistics of intranet established use
Collective knowledge	Statistics of creative team work	Statistics of replicated team work
Routines	Inventory of innovation manuals, codes and routines descriptions	Inventory of replication manuals, codes and routines descriptions
Strategic alliances	Inventory of strategic alliances for innovation	Inventory of strategic alliances for efficiency
Brands	Inventory of brands	Inventory of brands
Market share	Statistics of market share	Statistics of market share
Partnerships	Statistics of partners	Statistics of partners
<i>Relational capital</i>		
Customers	Statistics of customers	Statistics of customers
Suppliers	Statistics of suppliers	Statistics of suppliers
Distribution channels	Statistics of distributing channels	Statistics of distributing channels
Customer loyalty	Statistics of customer relationship	Statistics of customer relationship
Distribution networks	Statistics of innovative complementary services and products	Statistics of efficient complementary services and products
Quality standards	Statistics of quality in innovation processes	Statistics of quality in standardization processes
Brand recognition	Statistics of brands	Statistics of brands
Reputation	Statistics of ratings	Statistics of ratings

(continued)

IC drivers	Exploration measures	Exploitation measures
<i>Human capital</i>		
Employees	Employees' inventory and statistics	Employees' inventory and statistics
Individual knowledge	Statistics of individual learning	Statistics of individual knowledge sharing
Personnel retention	Statistics on new staff	Statistics of staff turnover
Expertise	Innovative expertise inventory and statistics	Standardized expertise inventory and statistics
Competence	Innovative best practices inventory and statistics	Standardized best practices inventory and statistics
Education	Employees' education inventory	Employees' education inventory
Employee benefits	Employee benefits inventory	Employee benefits inventory
Know-how	Organizational learning inventory and statistics	Organizational knowledge sharing inventory and statistics
Employee satisfaction	Employees satisfaction index	Employees satisfaction index
Motivation	Motivation index	Motivation index
Career development	Careers paths inventory and statistics	Careers paths inventory and statistics
Empowerment	Formalized empowerment inventory and statistics	Formalized empowerment inventory and statistics
Mentoring	Mentoring programs inventory and statistics	Mentoring programs inventory and statistics

Source: Adapted from Bose, 2004; Goldoni and Oliveira, 2006; Ax and Marton, 2007 and the authors

Each IC driver has to be operationalized into the measures that clearly capture and specify the objective nature of drivers. We have tried to ensure that the scope of the framework is explicitly stated and a parsimonious approach led us to be very careful when choosing measures. Regarding the adequacy of these measures, we believe to offer high explanatory power running on theory-based measures, being contingent upon the specification of relationship and having the measures strongly developed on previous theoretical as well as empirical work. Evidence from previous data analysis and consistent practices and statements by key informants are relevant, but nevertheless not alone sufficiently enough to constitute total of explanation: deduction that led us from theory to the measures that is truly built on logic. We recognize that readers naturally require greater proof when facing a new or provocative idea, than one they already believe to be true (Nisbett and Ross, 1980), but we also need recognize that a major contribution can be made when data is more illustrative than definite (Sutton and Staw, 1995), or just a long list proposed typologies completely disconnected and not applicable.

Step 3: KM strategy

Once all IC drivers and its measures are known, a knowledge management strategy has to be chosen and implemented. The most suitable one should implement the strategic choices and capture market value creation opportunities, profiting on that. Bearing these in mind, managers should develop several actions to benefit from such opportunities in the firm context, taking advantage of their full potential by applying a consistent knowledge management strategy.

Managing IC requires the managing of knowledge. Literature presents a clear distinction between the two main knowledge management strategies: exploitation and exploration (March, 1991; Lovas and Ghoshal, 2000; SubbaNarasimha, 2001; Choo and Bontis, 2002; Bierly and Daly, 2002; Ichijo, 2002; Knott, 2002; Zack, 2002). This typology presents a considerable cumulative literature and it has already been operationalized in several studies (see Table II). Briefly, the exploitation knowledge management strategy values the transfer and the diffusion of knowledge within the organization; on the contrary, the exploration knowledge management strategy promotes innovation and the creation of new knowledge in the organizational setting (Curado, 2008).

Exploration consists of the development of learning routines that the organisation establishes to create new products and processes. Flexibility, research, risk taking, experimenting and innovation are significant components of this process. Exploitation consists of the development of learning routines that refine these products, processes and pre-existing knowledge bases. Choice, production, efficiency, selection, implementation and execution are significant components of this process (Curado and Bontis, 2007)

In reality, most firms engage in both activities simultaneously because they manage concurrent projects at different stages in the product development process. Yet, from a theoretical viewpoint, the exploration-exploitation model implies that a firm's competency that is currently exploited must have been explored at some earlier time (Rothaermel and Deeds, 2004). The process that leads to direct innovation and commercial success can be attributable to the coordinated sequencing of exploration and exploitation as opposed to the selection of one or the other (Curado and Bontis, 2007).

KM practices	Human capital	Structural capital	Relational capital
Exploration	Certain individuals are responsible for collecting employees' ideas To stay in touch with new developments, our company hires new employees with particular expertise There is a brainstorming session each week for innovation and development purposes	People work a lot in groups here as a way to learn from one another Certain individuals are responsible for sharing employees' ideas Management consults employees frequently to discuss new developments Multidepartment teams are often challenged to contribute with solutions for organizational problems	Staying in touch with professionals and experts outside the company The organization encourages employees to join formal or informal networks outside the organization Our company collaborates with other organizations (companies, universities, technical colleges) through alliances
Exploitation	When employees leave, we often contact them (by e-mail or phone) to ask about how they did things around here Employees share knowledge and experience by talking to one another We pay a lot of attention to sharing "best practices" within the organization A formal mentoring/coaching system is implemented	All the employees in the organization have access to the organization's databases Knowledge gained within the firm is frequently stored in formal repositories (written notebook, or computer database) Job rotation is used extensively to help people learn about different parts of the organization People work a lot in groups here as a way to learn from one another	Sending employees to exhibitions, congresses or seminars on a regular basis The organization encourages employees to join formal or informal networks outside the organization Our company collaborates with other organizations (companies, universities, technical colleges) through alliances

Source: Adapted from Zhou and Uhlman (2008)

Table II.
Knowledge management practices

Step 4: Application of tools

To properly follow the implementation of the chosen strategy, it is necessary to have a permanent flow of information on the IC driver's measures.

Open communication efficacy is deeply rooted in the classical studies, nevertheless, some researchers (Eisenberg, 1984 cited in Eisenberg and Witten, 1987; McCaskey, 1982; Pascale and Athos, 1981; Pfeffer, 1977) have argued that organizational participants are oriented towards multiple goals and communicate in ways that may not be completely open, but even so may be effective. Information is far wider than the one contained in the accounting system; it includes all the data and intelligence that are needed by decision-makers (Daniel, 1961). For such purpose, managers have to guarantee that a permanent inflow of information is assured, allowing for an ongoing registering of all chosen indicators that affect the course of action of the elected strategy. The data collection should be sustained by the ones that are better located in the firm to do so, this way allowing for compilation and transmission of information to be every person's responsibility within the firm.

Step 5: IC disclosure

The realization of shareholder value through IC management requires recognition of value by the investment community. Orens *et al.* (2009) have shown that firms in Belgium, France, Germany and The Netherlands that provide web-based intellectual-capital reporting benefit from higher firm level. Therefore, effective communication is an essential component of the MMRIC.

Firms are continually looking for ways to improve in order to achieve and communicate the "above average" or "superior" performance. For more than a decade now, firms have been using non-financial performance indicators in their reporting systems in order to fully inform stakeholders on their performance (Ittner and Larcker, 1998). What drives an organization to measure and report IC (Marr, 2003)?:

- to help organizations with strategy formulation;
- to help assess strategy execution;
- to assist in strategic development, diversification and expansion decisions;
- as a basis for employee compensation; and
- to communicate with external stakeholders.

Still, a question rests: Has the systematic measurement, management and reporting of IC moved forward? The answer is probably not, especially since, all too often, organizations do not identify and develop the correct measures (Ittner and Larcker, 1998). Although it might be of huge relevancy, the failure to report on IC can have negative consequences for organizations (Marr, 2003):

- small shareholders may have less access to information than larger shareholders;
- managers with inside knowledge of intangibles may exploit their positions and engage in insider trading; and
- financiers may perceive the incorrect valuation of firms as leading to higher risk profiles, which could in turn lead to an increased cost of capital.

There has been a rapidly growing realization of the importance of disclosure of IC as a whole in the operation of organizations. Several Scandinavian companies have taken the global lead in this regard, including Skandia, Carl-Bro and Celemi who have all publicly disclosed IC statements. Sveiby (1997) argues that these companies are a sharp illustration of the differences in the managerial attitudes of the industrial and postindustrial ages.

There has been little evidence of the clarity that should be present when disclosing IC constructs. This is not just a problem for those concerned with IC management and disclosure, but it also appears and is debated vociferously in the subsidiary area of knowledge management (Pike *et al.*, 2002).

So far the literature on IC disclosure has focused on two specific areas: The company annual report (Guthrie and Petty, 2000; Brennan, 2001; April and Bosma, 2003; Bontis, 2003; Bozzolan, 2003; Abeysekera and Guthrie, 2005); and the different IC reporting frameworks that have been proliferated over the last two decades (Sveiby, 2004). From the perspective of various IC report frameworks, these appear to suffer the problems of proliferation, the confusion as to which framework should be used to best communicate to stakeholders (Sveiby, 2004), and the lack of analytical tools which can be used by stakeholders to make comparisons between different firms' IC and how IC is developed over time (Mouritsen and Bukh, 2003).

There is the conviction that accounting should meet the requirement of protecting public interest. Therefore, it should be coherent, objective, and verifiable. The subjective element should be reduced, leaving no space for manipulation or opportunism. At the same time, if accounting practices want to keep pace with the speed of changes and if they are to reflect truly and fairly the value and position of a company in the Knowledge Era and to communicate it in the proper way. Still, some doubts and reservations concerning how to measure and disclose IC persist and one of the main challenges facing accounting is to include IC in the system of its measurement and disclosure (Fijałkowska, 2008).

Step 6: Market value impact

Considering that an organization's principal aim is to maximize shareholder value, performance reports can be used to tell/show market analysts something that sustains increase shareholder value. The identification of such value creation drivers and their interrelations would be expected to improve resource allocation, performance measures, and the design of information systems (Ittner and Larcker, 1998). In this sense, analysis of non-financial information currently reported in private channels may be of interest to policymakers or regulators in the setting of mandatory disclosure requirements.

Recent literature reflects increasing interest in IC measurement, management and reporting (Cañibano *et al.*, 2000; Bontis, 2001; Kaufmann and Schneider, 2004; Abeysekera, 2006; Ax and Marton, 2008). In the knowledge-intensive firms of the post-industrial society, non-observable assets as management capabilities and competences, technical knowledge or tacit organizational routines, have impact on firm performance (Curado, 2008), so they should be reported.

The existing empirical evidence seems to support the benefits of reporting of IC to external stakeholders (Edvinsson, 1997; Meritum Project, 2002; Mouritsen, 2002; Mouritsen and Bukh, 2003; Systematic, 2004; Marr, 2003), for example a empirical study of *Fortune* 500 company annual reports supports the argument that IC

disclosure has an effect on market valuations (Abdolmohammadi, 2005). There is evidence to support the argument that company managers believe that the disclosure of IC increases transparency to capital markets leading to lower weighted cost of capital and therefore to higher market capitalization as it helps create trustworthiness with important stakeholders, supports the long-term vision via the propagation of long-term perspective, and lends itself for use as a marketing tool (van der Meer-Kooistra and Zijlstra, 2001). Thus it is likely that communication with external stakeholders will continue to be an important foundation for the measurement and reporting of IC. It is the method by which firms disclose IC that is of further interest.

The literature has focused on how to reverse the problems of other performance management reporting systems by suggesting replacing them by different frameworks (Neely *et al.*, 2004). Peña (2002) claims that organizations that have made an effort to manage and develop their IC have shown higher levels of performance than other that didn't so. In that sense, the IC of a firm is considered to be a critical element; the basis of a sustainable competitive advantage (Kremp and Mairesse, 2002). Sonnier *et al.* (2007) have gone further and have empirically supported that there is a relationship between IC disclosure and profitability. Thus it is argued that firms should examine the way in which they both manage and report on their IC, as it is likely that both performance and competitiveness benefits will increase.

Concluding remarks

Finally it is relevant to mention some factors that may discourage management from reporting and disclosing IC information, such as, the need to sustain competitive position; preventing information manipulation; risk enlargement regarding the predictions accuracy and the possible increase in operational cost as the result of bureaucracy (Fijałkowska, 2008). Still, Lev (2001) defends that such distrust is exaggerated and that to repudiate the measurement of IC would be a substantially greater problem for the long-term success. IC's disclose can help organizations to better manage, understand and communicate their knowledge resources and the value creation processes. There is still scepticism on IC reporting regarding the lack of organizational ownership of IC embedded in people (employees and personal networks) (Ax and Marton, 2008).

Nevertheless the executives' motivation to disclose non-financial information may relate to (Fijałkowska, 2008):

- a better definition of the company's vision;
- a finer description of the resources the company possesses and which of them should be increased or strengthened;
- a sharpen identification of a workable set of indicators for intangible resources related to their measures and drivers; and
- fosters information organization in order to support IC strategy

The interest shown by executives in IC has made it necessary to make available non-financial information in order to facilitate the decision making process (Pedrini, 2007), further more; we believe that firms should disclose their IC to the market in order to: a) reduce information asymmetry amongst market actors; and b) attain market valuations that better reflect the risk profile of the firm.

Considering that IC disclosure does impact on firm value as perceived by markets, we propose a framework to both measure; manage and report IC. This value creation based upon the strategic planning of IC is deep-rooted in the extant literature on the intangible's source of value creation and the sustainability reporting.

Our proposal is intended to be more than a framework only to report IC; we propose a reporting framework that encompasses the strategic IC management of the firm that allows top management to take the necessary action on data. We propose a framework that guarantees the consistency between the IC information disclosed externally and the knowledge management activities implemented internally.

It is our belief that through the identification of important value drivers firms can improve their competitive position and financial performance over the long run. However, MIC value contributors are not meaningful to the shareholder unless they are properly articulated and communicated.

Communicating IC and KM excellence as part of a corporate vision requires a systematic process that enables firm's to recognize and take advantage of opportunities for value creation. We do believe that this framework will be of great utility, as we have put a great effort on providing a useful managing, measuring and reporting tool in the sense that we accounted for its explanation potential and prediction adequacy, responding to previous needs identified in literature review (i.e. Rodgers, 2007).

The explanation potential of this framework is respected as it presents a substantial meaning of all drivers and measures, as well as the linkages between them. This was accounted for when we clearly specified the assumptions were we based our framework upon and when we clearly specified the substantive nature of the relationships among drivers and between drivers and measures, we have also ensured that the scope of the framework is explicitly stated and a parsimonious approach led us to be very careful when choosing measures. This explanatory potential is rooted in the logical beyond the arguments setting the relationships and not merely the listing of variables and items involved in the phenomenon.

Regarding the adequacy of the framework, we have not developed a tool to ensure probabilistic prediction or based upon universal laws of probability, but rather to offer a theory-based instrument. We have struggled to introduce in the framework high explanatory power running based on its contingency upon the specification of the practices, having the measures strongly developed on previous theoretical and empirical work. We respect the role that empirical evidence plays in supporting a new theory, as an important form of confirmation, so we have provided some illustrations and references on prior exploratory partial studies. Evidence from previous data analysis and consistent practices and statements by key informants are relevant, but nevertheless not alone sufficiently enough to constitute total of explanation: deduction that led us to a framework that is truly built on logical.

We believe this framework to be of great empirical potential as we have tried to develop it to correspond to the practitioner's demands for an operational model. Considering the previously identified boundaries or settings, this framework congregates a sufficient, yet, parsimony respectful, group of measures to adequately sufficiently although parsimoniously tap the domain of the phenomena involved in IC creation; managing; measuring and reporting.

We consider this framework to clearly configure a bridge between previous developed domains: Intangible value creation and corporate reporting. By integrating

these two fields and explaining how they complement and need each, it is our strong conviction that researchers and practitioners will benefit. This rationale was based upon the use of preexisting measures, and arguments that were adopted from clearly cited sources. This procedure allowed us to link past contributions into the newly proposed framework presenting a desirable fit among components.

We are aware that in the early stage of a theory there is this fine line between satisfying the criteria of internal logic and achieving a creative contribution, but as Bacharach (1989) puts it, we have tried to walk this line carefully. By providing both the theory and the method, we expect to be presenting a proper contribution that future research will test and sort out whether the theoretical statements hold up under scrutiny or not (Sutton and Staw, 1995).

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