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Human capital convergences in intellectual capital and sustainability reports

Matteo Pedrini
ALTIS – Postgraduate School of Business and Society, Via San Vittore, Milano, Italy

Abstract
Purpose – The purpose of this paper is to examine the points of convergence between intellectual capital and corporate responsibility reports with a focus on human capital issues.

Design/methodology/approach – To investigate this degree of integration the paper analyzes the common elements between human capital accounting and the Global Reporting Initiative Guidelines 2002. The assessment methodology consists of a study of which indicators for employees proposed in GRI guidelines are frequently used in 20 international best practices for intellectual capital reports.

Findings – Results show a large overlapping of indicators around three issues: the description of human capital, the reporting on diversity and opportunity, and the measurement of the quality and intensity of training.

Research limitations/implications – The research is focused on human capital that is one of the three dimensions of intellectual capital. It could also be interesting to study the points of convergence between corporate responsibility and the remaining two dimensions of intellectual capital: network capital and organizational capital.

Practical implications – The results demonstrate that the opportunity exists to integrate intellectual capital and corporate responsibility report in a global report, that will be useful to orient the sustainability practices in developing human capital.

Originality/value – This paper sustains the possibility that a correct management of corporate responsibility practices will be an opportunity to develop intellectual capital and a source of value creation.

Keywords Intellectual capital, Intangible assets, Human capital

Paper type Research paper

Introduction
Since the second half of the 1980s, the achievements of knowledge and innovation companies have pushed professionals and academics to identify new methodologies to determine a company’s value and to understand the features of this new process of value creation. In the 1990s the emergence of the resource-based view theory and the knowledge-based view theory suggested that the success of companies was no longer attributable solely to access to material resources – comparable to commodities – but rather to intangible assets, and it was that access that could provide a competitive edge over the long term (Argyris, 1992; Argyris and Schöön, 1996; Barney, 1991, 2001; Bontis et al., 2002; Grant, 1991, 1996a; b; Itami and Roehl, 1987; Nonaka and Takeuchi, 1995; Priem and Butler, 2001a, b; Peteraf, 1993; Senge, 1990; Wernerfelt, 1984, 1995).

The growing importance given to intellectual capital has underlined the limits of financial measurement systems, which cannot fully evaluate intangible resources and are inadequate to deal with the difficulties inherent in managing the development of...
new emerging assets. The difficulties related to the application of financial criteria, based on historical costs or negotiation values, have highlighted the lack of timeliness and reliability of information, so much so that management has been forced to make decisions regarding intangible assets while relying exclusively on periodic financial information which is intrinsically unable to assess these assets' real value. The limits of monitoring systems based on financial criteria are found in the ever-increasing discrepancy in price-to-book value observed in recent years, an indication of the incapacity to fully measure the value of a company’s intangible resources (Lev, 1997, 2001; Andriessen, 2001, 2002; Pike et al., 2002).

In response to these inadequacies, companies have developed monitoring systems for intellectual capital. This development has included the daunting task of determining a taxonomy and identifying those drivers which best describe and measure intellectual capital’s impact. Several models have been devised to measure intangible resources. These have been used as internal accounting instruments as well as external disclosure tools. This tool, often referred to as the Intellectual Capital Report, communicates the coherence between corporate strategy and management practices (Dati, 1997, 2000; Edvinsson and Malone, 1997; Guilding and Pike, 1990; Haanes and Lowendhal, 1997; Hall, 1992; Hammerer, 1996; Hendriksen and van Breda, 1992; Kaplan and Norton, 1992, 2004; Mortensen et al., 1997; Petrash, 1996; Roos and Roos, 1997; Sullivan, 2000; Sveiby, 1997; Teece, 2000).

At the time intellectual capital was being recognised as a determining factor in the success of a company, the consolidation of a new concept regarding businesses was taking place. The idea that the shareholders’ interests are the only legitimate aim of a company’s activities (Friedman, 1962, 1970), gave way to the urgent need, in running a company, to pay attention to the expectations of all those influenced, directly or indirectly by the company’s activity: the stakeholder theory (Freeman, 1984; Carroll, 1989; Clarkson, 1995; Donaldson and Preston, 1995).

Over time companies have developed accounting tools that reflect their commitment to the stakeholder theory. These tools have included Environmental and Social Reports and then Sustainability Reports. Around the subject of corporate responsibility, a group of practices and documents have been formed regarding ethical and social accountability, which attempt to respond to the needs and expectations of the stakeholders. These documents are drawn up with the aim of both implement and communicate corporate adherence to the stakeholder theory (Bauer and Fenn, 1972; Estes, 1976; Medawar, 1978; Mathews, 1993; Zadek and Evans, 1993; Gray, 1996, 2001; Zadek et al., 1997; Adams, 2002).

It is of interest to query whether the simultaneous increase of attention being paid to both intellectual capital and corporate responsibility are independent phenomena or whether there are convergences between the monitoring systems developed for intellectual capital and practices of ethical and social accountability.

The aim of this research is to carry out an empirical investigation into the theory of a convergence between the Intellectual Capital Report and the Sustainability Report, in order to identify their common points and isolate the information relating to the subject of corporate responsibility that is provided within the Intellectual Capital Report. To this end human capital, being of substantial importance for both theories, was the focus of attention. A sample of 20 companies measured the frequency with which the
indicators, usually adopted in ethical and social accountability matters to respond to the fulfilment of worker expectations, were also used in Intellectual Capital Reports.

A presentation of the possible common elements between corporate responsibility and the management of intellectual capital will be followed by an in-depth look at factors favouring the inclusion of the indicators typical of a Sustainability Report within the Intellectual Capital Report. The work concludes with some observations regarding the intensity and nature of those common points and with an evaluation of the utility of creating a single integrated report.

**Intellectual capital and corporate responsibility, a new challenge**

The examination of the hypothesis of a future conversion between corporate responsibility and intellectual capital management should start from the understanding of those factors which have brought the two themes to the attention of the scientific community and which can encourage their convergence.

*Reasons for increased attention to intellectual capital*

Recent years have witnessed the increasing importance of intellectual capital as a company value-driver. This attracted the attention of both management and the academic community. The reasons, which have contributed, to the development of this increased interest can be ascribed to two differing groups of factors: macroeconomic phenomena and economic characteristics regarding intangible resources. A virtuous circle has thus been created which, following the interaction between the two, has created growing interest in intellectual capital.

The phenomena, which have supported this interest in intellectual capital, are described following.

*The development of legal protection for patents.* In recent years there has been an increase in the legal protection norms and tools for patents and inventions. Contributing to this development have been: the leading role of the USA, through the intervention of the Court of Appeals for the Federal Circuit in 1982, which has encouraged this evolution worldwide and the tightening up of antitrust legislation that has aroused interest in patents as tools of monopolies not in line with situations sanctioned by the Antitrust Authorities (Sullivan, 2000). The rising number of norms protecting patenting rights has increased the possibility of negotiation and has supported the development of a specific market, arousing interest in them because the owner can benefit both from their direct use as well as from the ceding those rights (Teece, 2000).  

*Increased competition.* Acceleration in the production and development of the supply of products/services in the market has increased the competition a company faces. In order to address this intense increase, companies need to develop their competencies and the necessary resources in order to reduce the time to develop, produce and sell their products/services. This creates for management an ever-increasing urgency in the use of intellectual capital.

*Increased connection among the actors in the market.* The phenomenon of globalization has resulted in companies moving from a national to a global strategy (Barlett and Ghoshal, 1989) and has intensified the networking between the various actors in the market (Cowan and van de Paal, 2000). The ability to integrate and organize these relations into a single global strategy is understood as an important
factor in determining the success of a company. The importance of the relations within networks has grown and become a strategic asset in part as a result of corporate downsizing and outsourcing.

**Interest in company finances.** Attention paid to market trends has grown in recent years as a result of the increase in daily trade volumes, and the large number of merger, acquisitions, spin-offs and IPOs. The Interest in share price has generated the need for investors to assess a firm’s value and to understand the reasons for the discrepancy in the relationship between the share value and the value of the accounts of an enterprise (price-to-book). Research into a reason for the gap between the value of a balance sheet and the value on the stock exchange has intensified interest in intellectual capital, identifying its exclusion as the missing entry in the assessment of a firm’s real value and as the main reason for this gap.

**Acceleration of information communication technology (ICT).** The acceleration in development of ICT has brought about a change from the pattern of traditional production to that of “the economy of abundance” (Sullivan, 2000). ICT has sped up internal strategic and operative information processing, removing any doubts regarding the significance of the value of information. Correct and timely running of the ICT means management can make better-informed decisions while fully evaluating available resources (Teece, 2000).

**More interest in the individual.** The advent of the dot.com era has emphasized how a winning idea can considerably improve traditional production factors. Enterprises compete in the labour market in order to attract and keep the best talent because they are convinced that ideas and competences are critical factors for their success. Thus the attention of businesses is being focussed on the individual as the principle driver of value creation.

**Consultancy institutions and company activities.** The massive growth of the economy in Asia is a threat to the European and American economy. This threat is due in part to the quantity and low cost of labour. National and trans-national institutions are so alarmed at the possible loss of competitiveness for American and European production that they have singled out and proposed the development of intangible resources as a tool to defend the competitiveness of Western enterprises. The efforts of companies to attain excellence in R&D and HC have awakened the interest of management in intellectual capital.

**Economic features of intellectual capital.** The above cited macro economic phenomena have been reinforced by the features which make intangible resources unique among the assets of a company. These intangible resources have been classified according to their ability to leverage or limit value creation.

As shown in economic studies of this matter the capacity of intellectual capital to generate value is due to several of its unique characteristics:

1. **Scalability.** Physical assets are limited by their tangibility. This tangibility prevents their simultaneous use by more than one subject at a time and thus creates a physical barrier of scarcity. This means a choice must be made for the best use of these assets following the criteria of cost-opportunity. Intangible assets on the other hand can be put to non-competitive use, since the use of them by one person does not exclude their use by another. Their use is limited only by the size of the internal market (Romer, 1994, 1998). The ability to obtain value from intangible resources is tied to the development of production systems...
which incentives their simultaneous use and consequently overcome the paradigm of scarcity.

(2) Growing returns. Intangible resources benefit from a process of accumulation, which can produce an increasing scale of return. Each development in an intangible resource benefits from the previous one. This is contrary to what has been observed in tangible resources, which need to be substituted in their development (Grossman and Helpman, 1994). The extent of the increasing scale of return can be attributed to four factors (Teece, 2000):

- The creation of standards whereby the owner of the recognised standard can obtain greater advantage by increasing the number of followers of this standard;
- The phenomenon of customer lock-in (Farrell and Shapiro, 1988; Katz and Shapiro, 1986), since consumer adhesion to a standard increases the costs of change from one technology to another;
- The high costs of development; and
- The “snowball” effect which states that those already present in the market accumulate ever increasing skills.

(3) Difficulty to imitate. The generation and development of immaterial resources is difficult to imitate due to three distinct phenomena:

- Casual ambiguity. The combination of the environmental conditions and the link between cause-effect which lead to the creation of immaterial resources is very hard to replicate;
- The dependency path. Development and improvement are subject to the positive or negative influences of previous decisions made (Liebowitz and Margolis, 1999);
- Time compression. The development of intangible resources demands a long period of time, which is, does not encourage imitation.

(4) Network effect. At the centre of a network an innovation protected by a patent is often found (Lev, 2001), consequently the intangible resource benefit from the main rule of networks which states that the advantages of inclusion grow as the number of people involved grows. The bigger the network, the more advantages each individual will gain (Shapiro and Varian, 1999).

On the flip side the factors which limit the ability of intellectual capital to generate value are:

- Partial exclusion. The absence of a physical presence makes it difficult to exclude other actors in the market from using the intellectual capital. Even guaranteed legal protection of patents, though reinforced in the last decades, cannot fully guarantee exclusivity. The spillover phenomena, which offer companies learning opportunities from their competitors, makes the exclusion of third parties from accessing intangible resources is only partial

- Intrinsic risk. The high initial investment needed compared to that of material resources, and the increasing speed with which technologies and market factors change are obstacles in management’s search of those innovations which are able
to eliminate previous technological patterns (Bower and Christensen, 1995). As a result there is greater risk in the development of intangible resources when compared to that of tangible resources.

- **Negotiation difficulties.** Negotiations regarding intangible resources are extremely complicated due to two main factors: the evaluation of these resources is highly subjective; substantial information imbalances exist which can lead to such problems as insider trading and volatile prices.

**Reasons for the growth of interest in corporate responsibility**

Recent years have revealed a significant increase in interest in the stakeholder theory, understood as the sum of complex converging forces which constitute “the corporate responsibility engine” (Molteni, 2004). These forces can be grouped in the following ways.

**Socio-economic macro-phenomena.** These forces push organisations to take on social and economic needs, which previously had been under the total control of the state or civil society. They are: globalization, which has made corporations more responsible for a balanced global growth due to their increasing economic importance (Anderson and Cavanagh, 2000); ecological problems which due to, increased fear following human-induced climatic changes has forced enterprises to deal with the awareness of citizens of climate changes; financial market integration, which has increased expectations regarding transparency and corporate governance; the spread of responsible consumers, resulting in their preference for choosing environmental friendly brands (Smith, 1990; Molteni and Devigili, 2004); recent scandals and bankruptcies which has drawn public attention to the fall out on the community following irresponsible company behaviour.

**Regulations.** Governments and public institutions have promulgated norms to guide the development of corporate responsibility among companies. Those of major importance include Global Compact, ILO conventions, the EU Green Book of July 2001 and the Sarbanes-Oxley Act of 2002.

**Certifications and standards.** Contemporary with the promulgation of external standards, corporate responsibility self-regulation has developed and been promoted by non-profit companies and organisations, awarding, certifications such as SA8000, EMAS and ISO 14001 certificates.

**Investing in social responsibility.** Sustainability has become a focus of attention for financial rating firms, which have developed systems to include the evaluation of the ethical and social behaviours of companies. The aim is two-fold: to provide a rating of the stock performance of companies, which are socially aware, and to allow ethically sensitive shareholders to invest according to their convictions.

**Corporate responsibility centres.** Another phenomenon, which has attracted the attention of the corporate world to corporate responsibility matters, is the increase of activity in those research organizational networks, which make corporate responsibility their mission.

**Services and initiatives for enterprises.** Consultancy company activity has encouraged the development of corporate responsibility. Perceiving the opportunity for new business they have increased their services to support the corporate commitment to sustainability. These consulting firms for example, have been instrumental in the development of social accountability reports and in the creation of cause-related marketing campaigns.
“Corporate responsibility-intellectual capital-financial performance” paradigm
The temporal convergence of phenomena which have brought about the increasing importance of intangible resources and the dynamics of those elements which have attracted attention to corporate responsibility, have thrown a new challenge at the business world: to work while respecting both the principles of sustainability and the development of intellectual capital. A closer analysis shows that there exists a real possibility for developing a single strategy and a single management process.

Research carried out between 1972 and 1999 has shown in most cases a positive relationship between corporate responsibility and financial performance. (Margolis and Walsh, 2001). This positive effect is the result of the connection between corporate responsibility and intellectual capital, which utilizes the stakeholder theory as an instrument to develop intangible resources. The subsequent enhancement of intangible resources generates a future economic benefit and thus improves financial performance. Intangible resources, therefore, benefit from that corporate responsibility activity which was created according to the “Corporate responsibility-Intellectual capital-Financial performance” paradigm (Molteni, 2004).

Companies are thus faced with the challenge of both becoming socially responsible and of trying to develop their immaterial resources. Corporate responsibility practices oriented toward improving intangible resources result in better financial performance. Those CSR practices which reflect the company’s commitment to its social and environmental context can also be brought to bear upon the development of its intellectual capital. Even though the benefits for intellectual capital are embedded in the nature of corporate responsibility practices, a careful management of these practices will further fulfill the stakeholders’ expectations and, taking advantage of the “Corporate responsibility-Intellectual capital-Financial performance” paradigm, deliver a competitive edge.

The stakeholder theory can be applied differently in each organisation according to the level of attention management pays toward social conditions, the relevance of the organisation within the society, the industry in which the company operates, and management’s creativity in responding to the needs of the stakeholders. Notwithstanding the risks of reducing corporate responsibility into a mere list of practices, the following table seeks to illustrate the positive effects of a corporate responsibility approach on intellectual capital (see Table I).

Measuring corporate responsibility and intellectual capital
Although corporate responsibility and intellectual capital are two distinct phenomena, they both suffer from a lack of information due to the inability of financial reporting tools to embrace their full dimension. Over the last decades the attempts made to find better means of measurement and disclosure have led to the development of two types of instruments: the ICS, which monitors and describes intellectual capital; and the Sustainability Report, which is concerned with the triple bottom line. Only in recent years have convergence trends been noted between these two reporting tools.
Measuring intellectual capital

During the 1990s instruments and frameworks to monitor intellectual capital proliferated and were developed according to two separate measurement methodologies: financial and non-financial.

The first tendency developed systems, which evaluated intangible resources in monetary terms – based on financial principles – and, specifically, sought for a methodology, which, although highly subjective, was considered to adjudicate the real economic value of one or a set of intangible resources within a company or group. The trend of utilizing financial tools led to the development of three different methodologies to evaluate intellectual capital:

1. Methodologies based on market capitalization of the company. The most important methods include: Tobin’s Q; Market-to-book value; Knowledge capital earnings (Lev, 1997) and Investor assigned market value – IAMV™ (Standfield, 1998).

2. Methodologies using the values communicated in the financial report. The most important ones include: Eva (Steward, 1997); Human resource cost and accounting (Flamholtz, 1985) and Calculated intangible value (Steward, 1997; Luthy, 1998).

### Table I.

<table>
<thead>
<tr>
<th>Intellectual capital</th>
<th>Corporate responsibility benefits</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Corporate strategy</td>
<td>Repositioning of the brand name</td>
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<tr>
<td>Corporate governance</td>
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<td>Human capital</td>
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<tr>
<td>Relational capital</td>
<td>Increase loyalty</td>
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<tr>
<td>Customer relationship</td>
<td>Improve skills and competencies</td>
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<tr>
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<tr>
<td>Investor relationship</td>
<td>Develop systems of knowledge sharing and team working</td>
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<tr>
<td>Network relationship</td>
<td>Improve image</td>
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<tr>
<td></td>
<td>Increase awareness</td>
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<td></td>
<td>Increase client loyalty</td>
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<td></td>
<td>Acquire new clients</td>
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<td></td>
<td>Extend the Evangelists activity</td>
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<tr>
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<td>Enlarge co-creation</td>
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<td>Availability</td>
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<tr>
<td></td>
<td>Strengthen co-operation</td>
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<td></td>
<td>Develop market trust</td>
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<td></td>
<td>Access to ethical indices</td>
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<td></td>
<td>Stabilization of relations with social forces</td>
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<td></td>
<td>Reduction of boycotting</td>
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</tbody>
</table>

*Human capital convergences*

*Table I. Intellectual capital and corporate responsibility benefits*
Methodologies based on discounting back future financial flows. These include: Total value creation – TVC™ (Anderson and McLean, 2000); The value explorer (Andriessen and Tiessen, 2000); Intellectual asset valuation (Sullivan, 2000) and Inclusive valuation methodology – IVM.

Intellectual capital evaluation based on quantitative methods, which are not financial, has taken many forms but they all follow the same process. This process includes identifying various components of intellectual capital and applying a classification, which allows them to be approached organically, and leads to the identifying of indicators. The indicators are then transcribed on a scorecard, a graph or a balance sheet from which intellectual capital trends can be monitored. While the financial value of intangible resources cannot be measured with these systems, a non-financial index expressing the value of intellectual capital can be drawn up. The most important methods of this kind include: IC – Index (Roos and Roos, 1997); Value Chain Scoreboard™ (Lev, 2001); Skandia Navigator (Edvinsson and Malone, 1997); Balanced Scorecard (Kaplan and Norton, 1992); Intangible asset monitor (Sveiby, 1997); Dow’s chemical value platform (Petrash, 1996); Danish guidelines (Dati, 1997, 2000); IC audit model (IFAC, 1998) and Value chain scoreboard (Lev, 2001).

Measuring corporate responsibility
With the appearance of corporate responsibility the urgency has arisen to find a system of measurement and valuation which allows managers and stakeholders to understand the company’s level of achievement in fulfilling stakeholder expectations.

The need to keep their word has stimulated an interest in developing accountability tools for social and ethical management. These are used to communicate the company’s environmental and societal impact. Documents, in the form of balance sheets, where drawn up which initially separated the entries regarding environmental and social issues. This lead to two separate reporting instruments: the Environmental Report and the Social Report. Drawn up following the directives of the Triple Bottom Line (Higgins, 2002) these two documents were subsequently integrated into a single report. Thus the Sustainability Report, a document which reports a company’s economic, social and environmental results was developed.

Sustainability balance sheets provide evidence of the company’s commitment to the social and environmental impacts of their activities. This engagement is communicated through sets of narrative information (mission, values, vision and corporate governance), and by a group of indicators, which consider social, environmental and financial results, obtained in the reporting year.

Social and ethical accounting models have proliferated on national and international level. The main international models include:

- Global Reporting Initiative (GRI). This is a project based on a multi-stakeholder process and is linked to an independent institution founded in 1997 with the aim of developing a framework of guidelines which organisations can use voluntarily to report on the economic, environmental, and social dimensions of management.
- AccountAbility 1000 (AA1000). This is an initiative launched in 1999 by the Institute of Social and Ethical Accounting (AccountAbility) in order to develop a framework to improve company performance by learning through stakeholder engagement. The aim is to encourage the use of stakeholder engagement.
practices as an integral part of daily management activity and to generate a system of objectives and indicators that can ensure their effectiveness. The process is based on planning, accounting, auditing and reporting and concentrates on the content and form of communication. The framework has been developed according to the Global Reporting Initiative and integrates perfectly.

- **Social Accountability 8000 (SA8000).** SA8000 is a global standard. It is a management system that can be implemented in each country and sector. It was developed in 1998 by CEOAA (subsequently SAI) with the aim of monitoring and certifying working conditions in organizations following nine prescribed areas. The standard is based on the conventions of the International Organisation on Standards (ISO). SA8000 uses the conventions of ILO as its point of reference to provide necessary definitions and to develop a management and control system, which can be certified by independent bodies. Social Accountability International provides a crediting system for companies and NGOs to check and certify the companies.

- **ISO 14001.** This is an international standard, voluntarily developed in 1996, in order to encourage an efficient system of environmental management. Conforming to this standard results in certification, given by an independent body and demonstrates the effort to minimize the negative environmental impact of production processes, products and services.

### Points of convergence

The separate directions development has taken following experience and studies of social and ethical and intellectual capital accounting have led to two independent models of reporting. In contrast, recent experience suggests that an eventual integration of the two accountability models is possible by drawing up a single report which a corporate responsibility strategy is developed, with attention to which the consequences it has for the intangible resources and of its commitment to develop a strategy which aims to orient corporate responsibility to maximize the firm-value through the “Corporate responsibility-Intellectual capital-Financial performance” paradigm.

This hypothetical report could be called the **Global Report** or the **Holistic Report**. Its genesis is supported by those elements common to the accountability experience of both corporate responsibility and intellectual capital, which make the process of integrating the two possible and natural.

A common element shared by the Intellectual Capital Report and Sustainability Report is their methodology of reporting. Both use quantitative indicators for financial and non-financial accounting, without necessitating a financial evaluation. The common use of this methodology facilitates the unifying the two reports and the reducing the problems due to the gathering information which is not uniform.

Another point of convergence between the two tools is the attention paid to shared issues, though from differing viewpoints. In particular human capital and relational capital management are issues for both the Intellectual Capital Report and the Sustainability Report. Both documents include matters of human resources. The Sustainability Report aims towards understanding the company’s efforts to satisfy workers’ expectations and reports on the development of the workforce and the
protection of human rights while the Intellectual Capital Report is oriented toward the reporting human capital development focusing on aspects of training, and measures the knowledge, ability, and motivation of the personnel. A valid example of how corporate responsibility and intellectual capital share some issues, even though from different vantage points, is in the training activities. The Sustainability Report is interested in this as an expression of the propensity within the organization to satisfy the expectations of the workers to improve professionally. The Intellectual Capital Report, however, is concerned with the interest of the company in developing the competences and ability among their personnel and therefore strengthens their human capital.

The possibility of developing a single report to monitor intellectual capital and the issues of corporate responsibility, therefore, is found in their mutual utilization of the same indicators. The single report creates the condition for a shared management of corporate responsibility and intellectual capital thus maximizing the benefits of intellectual capital gained from practicing corporate responsibility, and integrating the satisfaction of social expectations in intellectual capital practices.

Human capital convergence in intellectual capital reports and sustainability reports: an empirical analysis

Methodology

The empirical survey, the aim of which was the collecting of evidence of the convergences regarding human capital present in the Intellectual Capital Report and the Sustainability Report was divided into two phases: the first considered a representative group of companies involved in the drawing up and disclosure of Intellectual Capital Reports (Table II); the second was an analysis made of each Intellectual Capital Report in order to assess how many and which indicators proposed in the 2002 GRI guidelines (GRI (Global Reporting Initiative), 2002) were used voluntarily in each report.

The companies studied were classified according to their sector and the country of their corporate office. Intellectual Capital Report cases were analysed in Danish, Austrian, Indian, Spanish, Swedish, German and English companies. No uniform behaviour was observable in the kind of disclosures analysed in the 20 reports. Some firms drew up separate Intellectual Capital Reports while others communicated their intellectual capital in a dedicated section in the Annual Report.

From the study it was possible to identify those indicators used in each Intellectual Capital Report which were also found in the guidelines, both core and additional, laid out by the GRI in the section relating to "labour practices and decent work". The number of Intellectual Capital Reports in which every indicator of the GRI was used was then identified. Thus the inclusion rate of indicators from the guidelines relating to corporate responsibility could be observed.

Another part of the analysis ascribed the thematic area to each GRI indicator observed. Thanks to this analysis it was possible to have an overall view of the indicators of one area of corporate responsibility and understand the intensity (frequency of indicators) and amplitude (number of indicators) of corporate responsibility matters included in the voluntary reports of the company regarding intellectual capital.
<table>
<thead>
<tr>
<th>N</th>
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</table>
Model

Before revealing the results it is necessary to point out the difficulties in identifying the samples. Because of the voluntary nature of the two documents some issues are missing from the full list. Concerning the form of the Sustainability Report this was overcome by comparing them with the 2002 GRI guidelines. Such a comparison was not possible with the Intellectual Capital Report since there is no reliable international standard to work with. Consideration, therefore, was given to the Intellectual Capital Reports drawn up by those pioneering companies. The analysis concentrated on twenty of the most important examples of Intellectual Capital Reports and the most recent reports published were analysed in the order of their publication.

Most of the companies analysed were in the banking, insurance and consultancy sectors. In view of their maturity regarding intellectual capital matters, there is a prevalence of companies in Scandinavia, specifically in Denmark and Sweden (Table II).

Intellectual capital as reported as a part of the Annual Report was analysed like an autonomous report and other information disclosures in the Annual report were not considered. This made it possible, even in the case of integrated reports, to isolate unequivocally those indicators regarding human capital. The reports utilized varying classifications in their analysis and terminology varied but human capital was their focus. This made it possible to examine the typical sustainability indicators voluntarily introduced in the Intellectual Capital Report.

Content analysis

This analysis identifies those indicators from the GRI, which are most frequently utilized in the Intellectual Capital Reports (Table III).

The frequency of indicators within various Intellectual Capital Reports is inconsistent. In some of the documents analysed some indicators do not appear at all. Those most frequently found in the Intellectual Capital Reports and, therefore, significant in the overlap between corporate responsibility and intellectual capital are:

- net employment creation and average turnover segmented by region/country (18);
- composition of senior management and corporate governance bodies (including the board of directors), including female/male ratio and other indicators of diversity as culturally appropriate (16);
- average hours of training per year per employee by category of employee (14);
- breakdown of workforce by status (employee/non-employee) (13);
- breakdown of workforce by employment type (full time/part time) (12).

The indicators were subsequently allocated to five items of corporate responsibility that compose the section intituled “labour practices and decent work” in the GRI guidelines. The classification of the issues is based on recognised international standards, such as the Conventions of the International Labour Organization (OIL-ILO), the Universal Declaration of Human Rights of the United Nations, the Tripartite Declaration of OIL Regarding Multinational and Political-Social Companies, and the Guidelines for Multinational Enterprise of the Organisation for Economic Co-operation and Development (OSCE).

The areas identified are the following:

- Employment. This area collects information about the composition of the workforce in terms of its belonging to different countries, to different educational levels, the type of contracts offered as well as the sharing of workers with other organisations.
<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>C/A</th>
<th>Indicator</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>LA1</td>
<td>C</td>
<td>Breakdown of workforce, where possible, by:</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Region/country</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Status (employee/non-employee)</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Employment type (full time/part time)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Employment contract (indefinite or permanent/fixed term or temporary)</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Conjunction with other employers (temporary agency workers or workers in co-employment relationships), segmented by region/country</td>
<td>6</td>
</tr>
<tr>
<td>Labour management relations</td>
<td>LA2</td>
<td>C</td>
<td>Net employment creation and average turnover segmented by region/country</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>LA12</td>
<td>A</td>
<td>Employee benefits beyond those legally mandated</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>LA3</td>
<td>C</td>
<td>Percentage of employees represented by independent trade union organisations or other bona fide employee representatives broken down geographically or percentage of employees covered by collective bargaining agreements broken down by region/country</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LA4</td>
<td>C</td>
<td>Policy and procedures involving information, consultation, and negotiation with employees over changes in the reporting organisation’s operations (e.g. restructuring)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>LA13</td>
<td>A</td>
<td>Provision for formal worker representation in decision-making or management, including corporate governance</td>
<td>4</td>
</tr>
<tr>
<td>Health and safety</td>
<td>LA5</td>
<td>C</td>
<td>Practices on recording and notification of occupational accidents and diseases, and how they relate to the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>LA6</td>
<td>C</td>
<td>Description of formal joint health and safety committees comprising management and worker representatives and proportion of workforce covered by any such committees</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LA7</td>
<td>C</td>
<td>Standard injury, lost day, and absentee rates and number of work-related fatalities (including subcontracted workers)</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>LA8</td>
<td>C</td>
<td>Description of policies or programmes (for the workplace and beyond) on HIV/AIDS.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>LA14</td>
<td>A</td>
<td>Evidence of substantial compliance with the ILO Guidelines for Occupational Health Management Systems</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>LA15</td>
<td>A</td>
<td>Description of formal agreements with trade unions or other bona fide employee representatives covering health and safety at work and proportion of the workforce covered by any such agreements</td>
<td>0</td>
</tr>
<tr>
<td>Training and education</td>
<td>LA9</td>
<td>C</td>
<td>Average hours of training per year per employee by category of employee</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>LA16</td>
<td>A</td>
<td>Description of programmes to support the continued employability of employees and to manage career endings</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>LA17</td>
<td>A</td>
<td>Specific policies and programmes for skills management or for lifelong learning</td>
<td>11</td>
</tr>
</tbody>
</table>

(continued)
Labour management relations. Corporate responsibility supports good relations between company and workers. Its manifestations include the forming of employee boards, which are consulted about changes of activity in the organisation.

Health and safety. This area monitors the practices carried out by the company to guarantee worker safety and to contain the rate of accidents. Particular attention is paid to the inclusion of workers in committees aimed at supporting continuous improvement in health and safety matters.

Training and education. The responsibility of the company towards its workers can be demonstrated in its programs of training and education. These programs foster the acquisition of competences and skills and respond to the desire of the employees to have a job that enhances their professional and personal development.

Diversity and opportunity. The attention the company dedicates to its workers is also evidenced in its guaranteeing them equal opportunities and avoiding discrimination. The company should be able to give evidence of how equal opportunities are guaranteed within the company in its policies, practices and organigram.

Results

The Intellectual Capital Reports demonstrate the different kind of attention paid to issues relating to human capital and the orientation of intellectual capital compared to that which is described in the Global Reporting Initiative. The Intellectual Capital Reports consider human capital as an asset of the company and, therefore, examine how it can be best developed according to management strategy. Corporate Responsibility collocates the consideration of human resources within the fabric of the company, it responds to the expectations of the workforce and, by demonstrating ethical behaviour and respect for its values and social issues, aims to develop and maintain a social justification for the company. Some aspects of the two approaches comprise different observations, but research has confirmed that points of common interest between corporate responsibility and intellectual capital do exist, supporting the theory that the institution of corporate responsibility practices would support intellectual capital development and so enhance company performance. The adoption of the “Corporate responsibility-intellectual capital-financial performance” paradigm

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>C/A</th>
<th>Indicator</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity and opportunity</td>
<td>LA10</td>
<td>C</td>
<td>Description of equal opportunity policies or programmes, as well as monitoring systems to ensure compliance and results of monitoring</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>LA11</td>
<td>C</td>
<td>Composition of senior management and corporate governance bodies (including the board of directors), including female/male ratio and other indicators of diversity as culturally appropriate</td>
<td>16</td>
</tr>
</tbody>
</table>

Note: a C = Core indicator; A = Additional indicator

Table III.
offers a dual benefit: an enhancement of corporate citizenship and an improvement in corporate intellectual capital.

The empirical analyses have shown the presence of a mix of indicators used simultaneously in both intellectual capital accountability practices and social and ethical accountability practices. The results confirm a possible future convergence between these two tools based on the overlap of these indicators. A single document could simultaneously illustrate intellectual capital trends and the consideration of social issues.

The existence overlapping phenomenon points to a possible reclassification of the indicators monitored in the five areas of the GRI guidelines. Such a reclassification emphasises those items, which are of major utility among the common indicators. The empirical analysis has shown how the division of indicators is concentrated mainly in a few reported areas. The results highlight the existence of strong-shared interest of corporate responsibility and intellectual capital in the development of competences and knowledge within the company (Figure 1).

The indicators utilized by the two documents converge significantly around three issues: the description of human capital, the reporting on diversity and opportunity and the measurement of the quality and intensity of training. Thus the convergence of the indicators happens where the issue at hand satisfies simultaneously the expectations of management in developing human capital and of the workers for equal treatment.

Therefore, it can be stated that Intellectual Capital Reports are able to demonstrate social awareness as an integral part of the framework for developing intellectual capital. The convergence is particularly clear in its description of the workforce. This description allows the understanding of the composition of workforce so that it is possible to respond both to the need to reconcile the interests of workers – the corporate responsibility approach – and the need to develop human capital in line with

![Human capital convergences](image_url)

**Figure 1.** Main GRI indicators included in the intellectual capital reports
its strategies – the intellectual capital approach. A similar logic can be applied to the overlap of equal opportunities and gender management, where the corporate responsibility interest lies in the equal treatment of the workers, while intellectual capital management is interested in the development of human capital in order to benefit from the balance between men and women as a source of creativity.

This workforce description when added to the description of training and education practices becomes necessary common element in both reports. The quantifying of the number of training hours the workers are given and the description of the number of courses is important to both approaches.

Conclusions
The interest shown by executives in corporate responsibility and intellectual capital has made it necessary to prepare non-financial information in order to facilitate the process of decision-making. Since it is impossible to manage that which cannot be measured, the need for a map of both the intellectual capital in the company as well as of their corporate responsibility practices has thus been identified as a first step toward good management.

The standards and accounting principles, which regulate accountability practices deriving from these two approaches, are separate and distinct. However, a significant set of indicators emerge, that are shared between these practices.

The convergence of the Intellectual Capital Report and the Sustainability Report could, therefore, prove a useful tool for companies. A single document, a Global or Holistic Report based on common information could make it possible to include the impact company practices have on their corporate citizenship and on the improvement of their intellectual capital. This could be a way to incentive corporate responsibility activities which favour the “Corporate responsibility-intellectual capital-financial performances” paradigm: highlighting pressing social needs becomes a source of increased firm value thanks to an acceleration of the development of the intangible resources within the company.

Producing a single report allows executives to understand how not all corporate responsibility practices have the same value and to dedicate more energy and resources to that which will increase the firm’s value. The integrated development of corporate citizenship and intellectual capital monitoring could enhance the benefits of corporate responsibility practices, and create a competitive edge.

The interest in a Global Report would result in an orientation toward increasing satisfaction for the stakeholder and value for the shareholder. The joint interpretation of corporate responsibility and intellectual capital, made possible by the creation of a Global Report, would optimize the use of the relations outlined in this document and lead to the development of integration of corporate responsibility into company strategy thus attaining a competitive advantage.

References


**Further reading**


**About the author**

Matteo Pedrini is researcher in ALTIS, the Postgraduate School in Business and Society of Catholic University of Sacred Heart. He is going to discuss his PhD thesis on strategic management of CSR and Intangibles development in Catholic University of Sacred Heart. Matteo Pedrini can be contacted at: matteo.pedrini@unicatt.it

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