Voluntary Disclosure of Information on Intangibles in Corporate Annual Reports

Ann Svensson*

Intangible assets have increased their importance in the information age. The book values of companies have constantly been shrinking in relation to market value. Besides, intangible assets are unaccounted in the traditional accounting system. This implies that there is an international pressure on companies to improve their accounting disclosure, related to their voluntary disclosure of narratives on intangibles. Resources and capabilities are contributing to the value creation and the performance of companies. Therefore, business processes and other knowledge-based intangibles are of importance to voluntary disclosure in corporate annual reports. The aim of this paper is to analyse what and how companies voluntarily disclose in their narratives in the annual reports, related to business processes and performance. This will be made in order to promote a higher coherence between value creation and the disclosure of intangible assets. A qualitative narrative analysis has been conducted on corporate annual reports from 2004 until 2010. Business- knowledge- and IT-based resources and capabilities are not much disclosed, on average. However, the disclosure of these resources and capabilities has generally increased during the period. Otherwise the disclosure shows different conditions for different companies, as derived from government decisions and changes in society, e. g., from printed media to digital media. It seems that each company has its own strengths, weaknesses, opportunities, threats and challenges, according to the disclosure of intangibles.

JEL Codes: M40, M41 and M48

1. Introduction

Intangible assets have become more and more important as the information and knowledge society has been prevalent in the end of the 20th century. At the same time, the intangibles have been more important to disclose to different stakeholders for companies. The book values of companies have constantly been shrinking in relation to market value (Cezair, 2008). The value and impact of intangibles are not adequately reflected in the traditional mandatory accounting framework (Beattie, Thomson, 2007). Intangibles can be denoted as a kind of unaccounted assets in the traditional accounting system. There is an international pressure on corporations to improve their accounting disclosure.

Wide ranges of participant groups and other organizations have also diverse interests and concerns to see that accounting practices of disclosure are improved. In the literature, practices of disclosure are basically related to the communication framework of the capital market. All kinds of contacts between the capital market and the corporation are called investor relations (Edenhammar, Jakobson, Wachtmeister et al, 2001) and such relations are regulated by the means of accounting. The fundamental belief is that improvements in disclosure will facilitate more informed stakeholders and international comparisons of corporate performance can be made.

However, there are opportunities for companies to voluntary disclose information on intangible assets in narrative format within corporate annual reports. Disclosing voluntary information on intangibles is a way to disclose a credible, cohesive and true and fair account of a company's activities (Mouritsen, et al., 2001).

Different theories can be used to explain the extent of the voluntary disclosure of intangible assets; agency theory, signalling theory, resource-based theory, legitimacy theory and stakeholder theory. Voluntary disclosure is a complex function of several factors, both company-specific factors and external factors. Hence, the practice about disclosing narratives on intangibles voluntary in annual reports is interesting to investigate, in order to find out if intangibles can explain some of the residual between book value and market value to stakeholders. However, there are findings indicating a weak relationship between intangibles disclosure in annual reports and the market value of a company (Williams, 2001). Several studies have been performed within this field of research, among others Guthrie and Petty (2000), Brennan (2001), Bozzolan, Favotto and Ricceri (2003) as well as Abeysekera and Guthrie (2004, 2005), have explored the disclosure of intangible assets.

Intangible assets can be described as the knowledge-based assets of a company; it has been indicated that assets such as know-how, reputation and databases contribute to the success of corporations (Abeysekera, 2006). The process of transforming or improving companies' routines and practices is called value creation (Mouritsen, Larsen, Bukh, 2001). Then it is important to focus on intangible assets when considering the 'value creation' processes. Hence, business processes with knowledge-based assets are important resources that now have become critical to companies in order to be competitive and successful within the increasing serviceand knowledge-directed society. Business processes and other related intangible assets are therefore of explicit importance for the value creation as well as to the performance of companies. These kinds of intangible can also be presumed to explain part of the difference between book value and market value. The aim of the paper is to analyse what companies voluntarily disclose in their narratives in the annual reports related to business processes and performance. This will be done in order to increase the coherence of the reported value creation in companies' annual reports related to what is promoted in literature on disclosure of intangible assets and intellectual capital.

This paper will focus on the internal and external structures in companies but not in human capital as human capital does not belong to the company per se, it can only be rented. On the contrary, intangible assets consist of internal/organizational and external/relational structures which can be traded by a company. Pure goodwill is excluded as this is only based on mergers and acquisitions and has a set price at a given date. Human capital comprises tacit knowledge embedded in the minds of the employees and can, therefore, not be seen as an intangible asset possessed by a company (Edvinsson, 1997). This paper refers to intangible assets and intangibles, interchangeably, to denote the internal as well as the external structures possessed by a company. Moreover, the concept of intangible assets is used, not the concept of intellectual capital, as human capital or employee competence, is excluded from this study. However, many scholars view intangible assets as being synonymous with intellectual capital.

The next section presents the literature review followed by the research method in section three. Thereafter, the results and analysis are presented in section four. The fifth and last section is the discussion and the conclusion.

2. Literature Review

The product of accounting is information. Accounting information is complex and individuals may react differently to it. Accounting information affects an individual's decisions and it also affects the operation of markets such as security markets and labour markets. The fundamental problem of financial accounting theory is that information provides a useful trade-off between relevance and reliability. Relevant information enables stakeholders to assess the company's future prospects. Reliable information is precise and free of bias or other management manipulation (Scott, 2009). The goal with accounting information is to provide information to different stakeholders, in order for them to evaluate the stewardship of the company's management. Even if the different stakeholders often have different interests, they all have the interest in relevant and reliable information from the management of the company.

2.1 Accounting Theories

To disclose is to reveal or uncover something. Disclosure can also be defined as the act or process of revealing or uncovering. The full disclosure principle requires that financial statements will be designed and prepared to portray the economic events accurately and activities that have affected the firm for a specific period. Companies disclose both mandatory and voluntary information about ithe financial and strategic situation as well as information about the corporate performance. In order to provide the users with accounting information, disclosure is to some extent regulated in rules, principles and standards. In some countries there are jurisdictions where the law dictates the form and contents of corporate reports, in other countries the accountancy profession to a great extent establishes its own principles and standards (Most, 1977). Often cultural settings explain the variability in the comprehensiveness of disclosure between different countries (Camfferman, Cooke, 2002). However, there are international norm-giving organizations working in order to harmonize the accounting information all over the world.

Annual reports are seen as the primary source of corporate information disclosure, as they provide both financial and non-financial information and both mandatory and voluntary information as well. The efficiency of the disclosure process is dependent upon the needs of the different stakeholders and of the interests of the management of the corporation (Debreceny, Gray, Mock, 2001). Two of the major participant groups interested in information disclosure are investors and financial analysts. These groups desire and need information to satisfy their decision requirements (Radebaugh, Gray, 2006). However, this paper is not restricted to the view of investors and financial analysts; it takes into account the general needs of different stakeholders.

A company's choice of what information to voluntarily disclose is related to what it would like to signal to its stakeholders. According to Smith and Taffler (1992) there is a link between clarity of exposition in the voluntary disclosure of information and performance. A clear narrative message will be associated with good financial

performance and poor financial performance will be associated with a message that obscures the communication or with misleading over-optimism (Smith, Taffler, 1992). Agency theory assumes an agent to act on a principal's behalf. The agent possesses information about his/her effort level, the state of nature, etc., that is not costlessly available to the principal. Moreover, it is supposed that the agent chooses actions to maximize his/her overall utility which also is assumed to be in conflict with the principal's interests. There exists an information asymmetry, as the principal cannot infer the agent's performance in detail from the overall result. The actions of directors are needed to be monitored and controlled by the boards, due to the directors' opportunistic behaviour (Jensen, Meckling, 1976; Williamson, 1985).

Two critical theories that can be used are legitimacy theory and stakeholder theory. Legitimacy theory requires that companies will be responsive as they seek to ensure that they operate within expressed or implied bounds and norms in the society. The bounds and norms change over time as they are not fixed. In this way, there will be a sort of social contract between a company and those affected by the company's activities, as the stakeholders, that companies are expected to comply with. Hence, the company's activities will be justified. If a company does not comply with the social contract and operate in a manner consistent with the expectation, it runs the risk of being penalized (Brown, Deegan, 1998). A stakeholder is defined as "any group or individual who can affect or is affected by the achievement of the firm's objectives" (Freeman, 1984). The ability to balance the conflicting interests of various stakeholders is a major objective of a company, as emphasized by the stakeholder theory. How the management match corporate resources within its environment will be restricted by the behaviour of various stakeholders' interests (Roberts, 1992). The more powerful stakeholder influences which information is communicated and how as it is more likely that the company has taken its expectations into account (Abeysekera, 2006).

The resources and capabilities a company owns and controls are important for its sustained competitive advantage. Especially, this is related to resources and capabilities that are valuable, rare, imperfectly imitable and not substitutable. As these resources and capabilities can be seen as both tangible and intangible assets, management skills, a company's organizational processes and routines as well as information and knowledge is included (Barney, 1991). Intangible resources denote assets as reputation, brand image and product quality, as well as information technology (IT) capabilities (Grant, 1991, 1995). A firm's ability to mobilize and deploy IT-based resources, as well as IT-enabled resources such as knowledge assets and customer orientation, is included in the organizational capabilities (Bharadwai, 2000). Capabilities comprise oorganizational competence and are rooted in business processes and routines (Prahalad, Hamel, 1990). Information systems researchers adopting a resource-based view have identified various IT related resources as potential sources of competitive advantage and financial performance. It is claimed that a company's ability to deploy IT for strategic objectives and use of a technological base as well as use of organizational information systems are primary sources of business growth and value creation (Ross, et al., 1996; Chatfield, Björn-Andersen, 1997).

2.2 Intangibles

Intangibles are related to potential future profit generation and future benefits. (Kaufmann, Schneider, 2004). The term intellectual capital is often used instead of

intangibles. However, both terms are often used within the same context and refer to the same content (Bukh, et al., 2001). Intangible assets have not any physical or financial appearance, as opposed to tangible assets, as buildings and equipment, and financial assets, as cash and stocks, in a company (Goh, Lim, 2004). However, there is confusion in defining intangible assets and the numerous denominations associated with it. Though, most definitions agree on the immaterial aspect, that these assets have neither physical substance nor specific monetary value. But, they significantly contribute to the value creation process in companies (St-Pierre, Audet, 2011).

Intangibles may be perceived differently, depending on different cultures. From a cultural perspective, identical intangibles may not be classified in the same way because they are assigned different properties. Gröjer (2001) states an example of the concept "knowledge", which is coupled to intangibles. Knowledge can be treated as something possible to separate in its own right. Another option is to treat knowledge as embedded in human capital. That knowledge is embedded in different types of organizational products and processes (e. g., patents) is a third option. In this way, an intangible is a social construct and lacks tangible characteristics.

There is a growing need, not to say a requirement, to make investments in intangibles within firms in order to maintain competitive position and ensure future viability. Intangible assets have been of growing concern in that they represent one of the main variables for companies' value creation (Aaker, 1991). According to the resourced-based theory, a company must have resources and capabilities that are superior to those of its competitors in order to develop a competitive advantage. Acquiring, holding and using assets, both tangible and intangible assets, relate to competitive advantage and superior performance (Cheng, et al., 2010). Moreover, intangible assets have been identified as a key resource and as a driver of business performance and value creation (Wu, et al., 2006).

In many cases the investments in intangibles are not reflected in the balance sheet. There exist relatively restrictive accounting criteria for the recognition of intangible assets and their valuation. Amir and Lev (1996) have identified that the telecommunications industry invests heavily in research and development, customerbased creation, franchise and brand development but these investments are fully expensed in the financial statements. Technology-based companies have made large amounts of investments in intangible assets, such as research and development, information technology, brands, human resources, which has not reflected the company value (Lev, Zarowin, 1999).

Financial reports are limited in information about the size, scope and growth of the intangible assets (Cumby, Conrod, 2001). Therefore, financial statements provide reliable but not relevant values of companies because the financial statements are becoming less informative on the company's current financial position and future prospects. Companies would be expected to disclose more textual information about their intangibles (Vafaei, Taylor, Ahmed, 2011). All stakeholders, different user groups, have the right to be provided with information about the company's activities including information about intangibles (Ousama, Fatima, Majdi, 2011). A great interest and demand from stakeholders for information on intangibles is motivating an increase in more disclosure of non-financial information (Arvidsson, 2011).

2.3 Knowledge Management and Business Processes

The area of knowledge management has traditionally pertained to the domain of organizations and management (Cook, Brown, 1999; Grover, Davenport, 2001). Through the 1990s managements realized that knowledge was perhaps the most critical intangible resource and that organizations generally poorly manage knowledge. From a resource-based view knowledge and knowledge management can be seen as a capability of organizations that implies organizational performance to improve (Earl, 2001). All activities in an organization that improve the value of knowledge assets are included in the content of knowledge management. The ability to bring the collective intelligence will influence the use of knowledge, to increase innovation abilities and performance of an organization. Knowledge has become a kind of a strategic resource in enterprises (Ho, 2009).

Knowledge can be treated as something people possess. Knowledge is residing in the mind of people and people also have to identify, interpret and internalize knowledge within the organization. However, knowledge when it becomes explicit and codified is held and applied by organizations and is available in performing different activities within the organization. Though, the available knowledge has to be effectively managed in order to create a competitive advantage and to increase profitability and value creation in a company. Knowledge has to be applied in a systematic and organized manner to create further knowledge (Ho, 2009). Organizational knowledge is viewed as a capital asset to increase the quality and performance of an organization (Grover, Davenport, 2001). The organizational knowledge is created by people working together, for example, in communities of practice (Brown, Duguid, 1998). When people are working together and are integrating their knowledge a better environment is created for learning and for the development of organizational knowledge (Orr, 1996).

Organizational knowledge is embedded in routines and processes that enable different activities. Therefore, knowledge is one of the most difficult resources to manage in an organization. Moreover, as knowledge is continually created by people, new knowledge has to be created and integrated in order to be able to be used within the organization (Baskerville, Dulipovici, 2006). The quality and the performance within an enterprise is rather dependent on how the available resources, for example, knowledge, are used, combined and integrated. Therefore, this motivates the need to measure and manage organizational knowledge (Baskerville, Dulipovici, 2006).

Knowledge integration is an important area within knowledge management (Maaninen-Olsson, Wismén, Carlsson, 2008). This area is focusing on how knowledge could be integrated within a community of practice (Wenger, 1999) or between different groups (Scarbrough, et al., 2004). Knowledge is an important and intrinsic resource within many work practices. However, this is especially true within professional and knowledge-intensive practices (Alvesson, 1993; Svensson, 2012). Collaborating social work environments are supporting creation, coordination, distribution and integration of knowledge (Sambamurthy, Subramani, 2005). Information systems are often used to support the development of organizations' knowledge management.

3. Research Method

A narrative content analysis methodology is used in this study. More precisely, it is a qualitative as well as a quantitative content analysis. Annual reports are used as the source documents. The qualitative approach goes beyond mere counting of words, to investigate meanings, themes and patterns in the annual reports (Abhayawansa, 2011). The research methodology is heavily influenced by the methodology developed by Beattie et al. (2004) and Beattie and Thomson (2007). This methodology is used for analyzing narrative information disclosure in annual reports. All sections of companies' annual reports are used as the resource of information in this study. This study has not been aimed to review the intention of the information on intangibles from the information providers. The main point in this study is to recognize if information about intangibles is disclosed in the annual reports, what and how it is disclosed and how much of this information is disclosed. The primary source data in this study is annual reports published by the companies within the chosen population.

The population consisted of about 260 publicly listed companies in the Swedish stock market, Nasdaq Stockholm OMX. From this stock market a sample of 20 companies was chosen. The sample was chosen from the following sectors; industrial goods, consumer services, health care and technology, Hence, this is a country-specific study that shows characteristics about information about intangibles assets in Swedish corporations. This is also a longitudinal study comprising the years from 2004 to 2010. All the full annual reports from the companies from these years were analyzed.

An items list was developed, based on an explorative qualitative approach. A review of literature on intangibles was conducted in order to examine which different items denote important themes of intangibles. About 110 items were searched for in all the annual reports. The items collected in this study are related to resources, voluntarily reported as intangibles or intellectual capital information, restricted to structural (internal structure) and relational (external structure) information. All the items are listed in Appendix 1. The frequency of each item has been counted in each annual report. At the same time each item has been categorized in monetary, numeric and visual appearance as well as if each item is forward- or backward-looking or if it is neutral. The counting of occurrences was restricted to voluntary disclosure and did not include disclosed information mandated by accounting standards or company law.

The annual reports were acquired from the respective company's web-sites, mostly. Whenever an annual report could not be found on the web-site, an e-mail was sent to the investor relations department with a request for the relevant annual report or reports. The annual reports were saved in Portable Document Format (PDF).

Annual reports have been validated as usable by earlier research. Annual reports have been considered as more reliable than other documents and its accessibility, consistency, timeliness and that it is an audited and comprehensive document is valued (Petty, Guthrie, 2000; Brennan, 2001; Olsson, 2001; Bontis, 2003; Bozzolan, et al., 2003; Abeysekera, Guthrie, 2005; Pablos, 2005).

4. Results and Analysis

About 70 to 85 per cent of the various types of information on intangibles were neutral according to the news-tenor. About 15 to 30 per cent were positive and from zero to three per cent were disclosed in a negative tenor. Most of the information was discursively disclosed and most of the information was neutral in its time orientation. As this is a work in progress further analyses will be conducted according to the collected data about the context of evidence, news-tenor and time orientation.

It is difficult to see regularities in the collected data. The total interpretation of the data is that the data often show different conditions for different companies. Different conditions can be derived from government decisions or from overall changes in the society as, for example, the changes in media from paper-based to digital media. The data can be interpreted that each company has its own strengths, weaknesses, opportunities, threats and challenges and that this is obvious also in the corporate annual reports.

Generally it seems that companies disclose information on specific intangibles when they are putting much effort into that specific intangible. An example could be a company concentrated on increasing its market share. When they succeeded in that they disclose relatively much positive information about market shares. But when the company seemed to stabilize its market share the disclosure of market share decreased. The very same phenomenon occurred in another company's annual report. This company was focusing on its software in its disclosures of intangibles that have been very sophisticated and also seemed to strengthen its position on the market and that the company's competitive advantage has increased to a great extent. It also seems that companies disclose more information about a specific intangible when this specific intangible is shown to be of a critical importance for the company. Companies also increase the disclosure when they feel that the performance is good but disclose less when the performance is less good. The companies are not very keen on disclosing information on any item that is not contributing to their performance. This can be exemplified with a company that is decreasing its disclosure on market share. The decreased disclosure implied a decline in the market as well as in the market share.

There are many companies not disclosing information about knowledge-related items. However, disclosure of knowledge-related items has generally increased during the period. The very same phenomenon is associated with disclosure of the item of lean, as lean production. Also, professionalism and professional work, business model, different kinds of information systems and databases as well as collaboration were items that have shown increased disclosure during the period. An increased focus on innovation and best practice can also be revealed from the study of intangibles disclosure in corporate annual reports. However, even if companies increase their disclosure on knowledge-related information not many companies are describing how the knowledge-related resources are used and applied within their business activities. Also, especially, one high-technology based company was not disclosing any knowledge-related information at all. On average, this increasing trend in disclosing knowledge-related information in corporate annual reports is showing the companies increased consciousness of knowledge and efficiency in their business activities.

Most of the companies disclosed information about the financial crisis. In the annual reports from 2008 and 2009 they disclosed rather negative information on the impact of the financial crisis. However, in 2010 they disclosed information about how they have recovered from it.

5. Discussion and Conclusion

Several scholars have concluded that the external relations, such as with customers, is the most reported category within intangibles in most annual reports (see, for example, Brennan, 2001, Bozzolan et al., 2003 and Abeysekera and Guthrie, 2004, 2005). Hence, for companies to disclose information about external structure could be a fruitful approach to show how they obtain competitive advantage and how they create value. However, there also exist other opportunities to disclose information of the companies' value-creation processes. This study is not intended to confirm or deny the most reported category of external relations as concluded from other studies. Instead, this study is focused on a higher number of detailed items describing intangible assets. Items that usually are included in such content analyses of intangibles disclosure in annual reports are included in this study, as well as items not searched for in other studies, associated with intangibles related to business resources and processes. Moreover, this study has tried to promote a higher coherence between value creation and the disclosure of intangible assets, as the choice of items denoting intangibles have been extended to include businessknowledge and IT-related resources and processes (Barney, 1991; Bharadwaj, 2000).

Resources and capabilities have been described in different industries (Eisenhardt, Martin, 2000). These have also become codified in the form of best practices that also have been disclosed in some companies' annual reports. However, what is important is that resources and capabilities, per se, cannot be a source of competitive advantage and performance of a company. Hence, it is not enough to disclose that resources and capabilities are sources of competitive advantage. The resources and capabilities have to be applied within the company and, therefore, a company is required to disclose also how the resources and the capabilities are applied in order that stakeholders could assess and evaluate the company's opportunities to create value.

The fact that the total interpretation of disclosure of intangible assets shows different conditions for different companies could direct the analysis in a wider focus, where different socio-economic and political contexts have different impacts on different companies (Abeysekera, 2006). These factors may have an impact on the companies' performance and financial stability and continuity.

The study will be further developed with analyses of the following variables (Oliveira, Rodrigues, Craig, 2006):

- Structural Variables firm size (total assets, turnover, market capitalization, number of employees), leverage (total liabilities/total equity), ownership concentration (percentage of shares owned by the three most important and known shareholders), type of auditor (Big 3 or 4 accounting firm)
- Performance Variables profitability (ratio or net income before tax divided by total assets)

 Market Variables – type of industry (high intangibles-intensive industries or not), listing status (listing in one foreign stock exchange or multi-listed or not), foreign activity (exports-to-sales ratio).

References

- Aaker, DA, 1991, Managing Trademark Equity, The Free Press, New York.
- Abeysekera, I, 2006, 'The project of intellectual capital disclosure: Researching the research', *Journal of Intellectual Capital*, Vol. 7, No. 1, pp. 61-77.
- Abeysekera, I, Guthrie, J, 2004, 'How is intellectual capital being reported in a developing nation?', Research in Accounting in Emerging Economies, Supplement 2: Accounting and Accountability in emerging and transition economies, pp. 149-169.
- Abeysekera, I, Guthrie, J, 2005, 'An Empirical Investigation of Annual Reporting Trends of Intellectual Capital in Sri Lanka', *Critical Perspectives on Accounting*, Vol. 16, No. 3, pp. 151-163.
- Abhayawansa, S, 2011, 'A Methodology for Investigating Intellectual Capital Information in Analyst Reports', *Journal of Intellectual Capital*, Vol. 12, No. 3, pp. 446-476.
- Alvesson, M, 1993, 'Organizations as Rhetoric: Knowledge-Intensive Firms and the Struggle with Ambiguity', *Journal of Management Studies*, Vol. 30, No. 6.
- Amir, E, Lev, B, 1996, 'Value-relevance of Nonfinancial Information: The Wireless Communications Industry', *Journal of Accounting and Economics*, Vol. 22, pp. 3-30.
- Arvidsson, S, 2011, 'Disclosure of Non-Financial Information in the Annual Report: A Management-Team Perspective', *Journal of Intellectual Capital*, Vol. 12, No. 2, pp. 277-300.
- Barney, JB, 1991, 'Firm resources and sustained competitive advantage', *Journal of Management*, Vol. 17, pp. 99–120.
- Baskerville, R, Dulipovici, A, 2006, 'The Theoretical Foundations of Knowledge Management', *Knowledge Management Research & Practice*, Vol. 4, pp. 83-105.
- Beattie, V, McInnes, B, Fernley, S, 2004, 'A Methodology for Analysing and Evaluating Narratives in Annual Reports: A Comprehensive Descriptive Profile and Metrics for Disclosure Quality Attributes', *Accounting Forum*, Vol, 28, pp. 205-236.
- Beattie, V, Thomson, SJ, 2007, 'Lifting the Lid on the Use of Content Analysis to Investigate Intellectual Capital Disclosures', *Accounting Forum*, Vol. 31, pp. 129-163.
- Bharadwaj, AS, 2000, 'A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation', *MIS Quarterly*, Vol. 24, No. 1, pp. 159-196.
- Bontis, N, 2003, 'Intellectual capital disclosure in Canadian corporations', *Journal of Human Resource Costing and Accounting*, Vol. 7, No. 1/2, pp. 9-20.
- Bozzolan, S, Favotto, F, Ricceri, F, 2003, 'Italian annual intellectual capital disclosure: An empirical analysis', *Journal of Intellectual Capital*, Vol 4 No 4, pp. 543-558.
- Brennan, N, 2001, 'Reporting Intellectual Capital in Annual Reports: Evidence from Ireland', *Accounting, Auditing & Accountability Journal*, Vol. 14, No. 4, pp. 423-436.

- Brown, N, Deegan, C, 1998, 'The Public Disclosure of Environmental Performance Information A Dual Test of Media Agenda Setting Theory and Legitimacy Theory', *Accounting and Business Research*, Vol., 29, No. 1, pp. 21-41.
- Brown, JS, Duguid, P, 1998, 'Organizing Knowledge', *California Management Review*, Vol. 40, No. 3, pp. 90-111.
- Bukh, PN, Larsen, HT, Mouritsen, J, 2001, 'Constructing intellectual capital statements', *Scandinavian Journal of Management*, Vol. 17 No. 1, pp. 87-108.
- Camfferman, K, Cooke, TE, 2002, 'An Analysis of Disclosure in the Annual Reports of U. K. and Dutch Companies', *Journal of International Accounting Research*, Vol 1.
- Cezair, JA, 2008, 'Intellectual Capital, Hiding in Plain View', *Journal of Performance Management*, Vol. 21, No. 2, pp. 29-69.
- Chatfield, AT, Björn-Andersen, N, 1997, 'The Impact of IOS-Enabled Business Process Change on Business Outcomes: Transformation of the Value Chain of Japan Airlines', *Journal of Management Information Systems*, Vol. 14, No. 1, pp. 13-40.
- Cheng, M-Y, Lin, J-Y, Hsiao, T-Y, Lin, TW, 2010, 'Invested Resource, Intellectual Capital, and Corporate Performance', *Journal of Intellectual Capital*, Vol. 11, Iss. 4, p. 433.
- Cook, SDN, Brown, JS, 1999, 'Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing', *Organization Science*, Vol 10, No 4, July-August, pp. 381-400
- Cumby, J, Conrod J, 2001, 'Non-Financial Performance Measures in the Canadian Biotechnology Industry', *Journa.l of Intellectual Capital*, Vol. 2, No. 3, pp. 261-272.
- Debreceny, R, Gray, GL, Mock, TH, 2001, 'Financial Reporting Web Sites: What Users Want in Terms of Form and Content', *The International Journal of Digital Accounting Research*, Vol 1, No 1, pp 1-23.
- Earl, M, 2001, 'Knowledge Management Strategies: Toward a Taxonomy', *Journal of Management Information Systems*, Vol. 18, No. 1, pp. 215-233.
- Edenhammar, H, Jakobson, T, Wachtmeister, C-J, 2001, *Investor Relations i praktiken*, Ekerlids Förlag, Falun.
- Edvinsson, L, 1997, 'Developing intellectual capital at Skandia', *Long Range Planning*, Vol 30, No 3, pp. 366-373.
- Eisenhardt, KM, Martin, JA, 2000, 'Dynamic capabilities: What are they?', *Strategic Management Journal*, Vol. 21, No. 10.11, pp. 1105-1121.
- Freeman, IL, 1984, Strategic Management.. A Stakeholder Approach, Marshall, MA, Pitman.
- Goh, PC, Lim, KP, 2004, 'Disclosing intellectual capital in company annual reports: Evidence from Malaysia', *Journal of Intellectual Capital*, Vol. 5 Iss. 3, pp. 500 510.
- Grant, RM, 1991, 'The Resource-Based Theory of Competitive Advantage', *California Management Review*, Vol. 33, No. 3, pp. 114-135.
- Grant, RM, 1995, Contemporary Strategy Analysis, Blackwell Publishers Inc, Oxford, UK.
- Grover, V, Davenport, TH, 2001, 'General Perspectives on Knowledge Management: Fostering a Research Agenda', *Journal of Management Information Systems*, Vol. 18, No. 1, pp. 5-21.
- Gröjer, JE, 2001, 'Intangibles and Accounting Classifications: In Search of a Classification Strategy', *Accounting, Organizations and Society*, Vol. 26, No. 7, pp. 695-713.

- Guthrie, J, Petty, R, 2000, 'Intellectual capital: Australian annual reporting practices', *Journal of Intellectual Capital*, Vol. 1 No. 3, pp. 241-251.
- Ho, C-T, 2009, 'The Relationship Between Knowledge Management Enablers and Performance', *Industrial Management & Data*, Vol. 109, No. 1, pp. 98-117.
- Jensen, MC, Meckling, WH, 1976, 'Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure', *Journal of Financial Economics*, Vol. 3, October, pp. 97-118.
- Kaufmann, L, Schneider, Y, 2004, 'Intangibles: A Synthesis of Current Research', Journal of Intellectual Capital, Vol. 5. No. 3, pp. 366-388.
- Lev, B, Zarowin, P, 1999, 'The Boundaries of Financial Reporting and How to Extend Them', *Journal of Accounting Research*, Vol. 37, No. 2, pp. 353-385.
- Maaninen-Olsson, E, Wismén, M, Carlsson, SA, 2008, 'Permanent and Temporary Work Practices: Knowledge Integration and the Meaning of Boundary Activities', *Knowledge Management Research & Practice*, Vol 6, pp. 260-273.
- Most, KS, 1977, Accounting Theory, Grid Inc. Columbus, Ohio, US.
- Mouritsen, J, Larsen, HT, Bukh, PN, 2001, 'Valuing the future: Intellectual capital supplements at Skandia', *Accounting, Auditing & Accountability Journal*, Vol. 16, No. 4, pp. 399-422.
- Oliveira, L, Rodrigues, LL, Craig, R, 2006, 'Firm-Specific Determinants of Intangibles Reporting: Evidence From the Portugese Stock Market', *Journal of Human Resource Costing & Accounting*, Vol. 10, No. 1, pp. 11-33.
- Olsson, B, 2001, 'Annual Reporting Practices: Information about Human Resources in Corporate Annual Reports in Major Swedish Companies', *Journal of Human Resource Costing & Accounting*, Vol. 6, Iss. 1, pp. 39 52.
- Orr, JE, 1996, *Talking About Machines: An Ethnography of a Modern Job*, ILR Press, Ithaca, NY.
- Ousama, AA, Fatima, AH, Majdi, AR, 2011, 'Usefulness of intellectual capital information: preparers' and users' views', *Journal of Intellectual Capital*, Vol. 12, Iss. 3, pp. 430 445.
- de Pablos, PO, 2005, 'Intellectual capital statements: what pioneering firms from Asia and Europe are doing now', *International Journal of Knowledge and Learning*, Vol. 1, No. 3, pp. 249-268.
- Petty, R, Guthrie, J, 2000, 'Intellectual Capital Literature Review: Measurement, Reporting and Management', *Journal of Intellectual Capital*, Vol. 1, No. 2/3, pp. 155-176.
- Prahalad, CK, Hamel, G, 1990, 'The Core Competence of the Organization', *Harward Business Review*, May-June, pp. 79-93.
- Radebaugh, LH, Gray, SJ, 2006, International accounting and multinational enterprises, Wiley, New York.
- Roberts, RW, 1992, 'Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory', *Accounting, Organizations and Society*, Vol. 17, No. 6, pp. 595-612.
- Ross, JW, Beath, CM, Goodhue, DL, 1996, 'Develop Long-Term Competitiveness Through IT Assets', *Sloan Management Review*, Vol, 38, No. 1, pp. 31-45.
- Sambamurthy, V, Subramani, M, 2005, 'Special Issues on Information Technologies and Knowledge Management', *MIS Quarterly*, Vol. 29, No. 1, pp. 1-7.
- Scarbrough, H, Swan, J, Laurent, S, Bresnen, M, Edelman, L, Newell, S, 2004, 'Project-Based Learning and the Role of Learning Boundaries', *Organization Studies*, Vol. 25, No. 9, pp. 1579-1600.
- Scott, WR, 2009, Financial Accounting Theory, Prentice Hall, Toronto.
- Smith, M, Taffler, RJ, 1992, 'The Chairman's Statement and corporate financial performance', *Accounting and Finance*, Vol. 32, No. 2, November, pp. 75-90.

- St-Pierre, J, Audet, J, 2011, 'Intangible Assets and Performance: Analysis on Manufacturing SMEs', *Journal of Intellectual Capital*, Vol. 12, No. 2, pp. 202-223.
- Vafaei, A, Taylor, D, Ahmed, K, 2011, 'The Value Relevance of Intellectual Capital Disclosures', *Journal of Intellectual Capital*, Vol. 12, No. 3, pp. 1469-1930.
- Williams, M, 2001, 'Are Intellectual Capital Performance and Disclosure Practices Related?', *Journal of Intellectual Capital*, Vol. 2, No. 3, pp. 192-203.
- Williamson, RW, 1985, The Economic Institutions of Capitalism, NY, Freeman.
- Wenger, E, 1999, Communities of Practice: Learning, Meaning and Identity, Cambridge University Press.
- Wu, WY, Tsai, JJ, Cheng, KY, Lai, M, 2006, 'Assessment of Intellectual Capital Management in Taiwanese IC Design Companies: Using DEA and the Malmquist Productivity Index', R & D Management, Vol. 36, No. 5, pp. 531-545.

Appendix 1

List of items

Internal structure		External structure
Administrative system	Knowledge strategy	Brand
Business expertize	Knowledge transfer	Brand name
Business intelligence	Lean	Business collaboration
Business knowledge	Management philosophy	Business relationship
Business model	Management policy	Company image
Business process	Management practice	Company reputation
Competitive intelligence	Management process	Customer capital
Computer system	Management quality	Customer knowledge
Concept	Management structure	Customer loyalty
Copyright	Network system	Customer network
Corporate culture	Organizational culture	Customer relationship
Corporate learning	Organizational expertize	Customer satisfaction
Corporate governance	Organizational knowledge	Distribution channel
Corporate university	Organizational learning	Favorable agreement
Cultural diversity	Organizational memory	Franchise
Database	Organizational structure	Licensing agreement
Decision support system	Patent	Major customers
Design	Process optimization	Marketing channel
Disseminate knowledge	Professionalism	Market share
Economic value added	Professional knowledge	Private Public Partnership
ERP-system	Property right	Relational capital
ERP-system Expert network	Property right Prototype	Relational capital Reputation
-		·
Expert network	Prototype	Reputation
Expert network Financial relation	Prototype Quality	Reputation Research collaboration
Expert network Financial relation Formulae	Prototype Quality Research and development	Reputation Research collaboration Strategic alliance
Expert network Financial relation Formulae Information system	Prototype Quality Research and development Research project	Reputation Research collaboration Strategic alliance Supplier knowledge
Expert network Financial relation Formulae Information system Information technology	Prototype Quality Research and development Research project Sharing knowledge	Reputation Research collaboration Strategic alliance Supplier knowledge Supplier network
Expert network Financial relation Formulae Information system Information technology Infrastructure asset	Prototype Quality Research and development Research project Sharing knowledge Software	Reputation Research collaboration Strategic alliance Supplier knowledge Supplier network
Expert network Financial relation Formulae Information system Information technology Infrastructure asset Innovation	Prototype Quality Research and development Research project Sharing knowledge Software Spirit	Reputation Research collaboration Strategic alliance Supplier knowledge Supplier network
Expert network Financial relation Formulae Information system Information technology Infrastructure asset Innovation Integrate knowledge	Prototype Quality Research and development Research project Sharing knowledge Software Spirit Strategy	Reputation Research collaboration Strategic alliance Supplier knowledge Supplier network
Expert network Financial relation Formulae Information system Information technology Infrastructure asset Innovation Integrate knowledge Intellectual capital	Prototype Quality Research and development Research project Sharing knowledge Software Spirit Strategy Structural capital	Reputation Research collaboration Strategic alliance Supplier knowledge Supplier network

IT expenditure	Trade secret	
Knowledge asset	Under development	
Knowledge capability		
Knowledge codification		
Knowledge coordination		
Knowledge creation		
Knowledge culture		
Knowledge diffusion		
Knowledge dissemination		
Knowledge expertise		
Knowledge integration		
Knowledge management		
Knowledge sharing		
Knowledge stock		