

The effect of increasing EU regulation on disclosure practices on intangible assets

by

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Introduction

Disclosure on intangible assets has attracted a lot of interest the latest years, from both a practical view as well as from the research community. While some disclosure items are compulsory to report because of regulation much of the financial disclosures from companies have been published voluntarily. Sweden has been seen as one of the countries with the most extensive voluntary disclosure practice. This is particularly true concerning information on intellectual capital where a lot of new models, key indicators and reports have been invented. In many respects Swedish companies have been pioneering in this development. Particularly informative reports are those of Skandia and Ericsson, but also of Astra Zeneca and Volvo, both earlier winners of the Swedish contest "best annual practice".

It is believed here that this development has taken place because of the lack of a strictly regulated environment in Sweden which has made possible that the initiative and responsibility is put over to companies; companies have been stimulating and encouraging each other to do better all the time. With the terminology of institutional theory (DiMaggio & Powell, 1983) what we can see is that mimetic pressure has been important while coercive pressure has been absent. The Swedish tradition has been an inductive regulation process where the companies have been allowed and encouraged to experiment with different reporting techniques. There has been a special clause in the Swedish legislation referring to "good accounting practice" as the dominant principle guiding the development of accounting. The law itself has been considered to be a "frame law" that should be interpreted and extended in accordance with this concept. The profession has worked in close companionship with the companies and in most situations established standards after they were accepted by the companies. In some cases they have published standards to stimulate companies to experiment with different methods in order to see which one is getting the most support (for example FAR's recommendations on cash flow statements); The standards were called "recommendations" and the companies were not forced to follow them, they were also written in a rather general fashion and with a language that were more encouraging than demanding. Argumentation in accounting was often to practical experience, Jönsson (1991) is writing: "The conclusion seems to be, then, that argumentation in accounting discourse is largely practical. Audiences are persuaded by references to practical experience and men of experience gain authority in discourse. There are few if any references to theory." (p 543) "... discourse on accounting norms is mainly practical. Practical experience and practical expediency are useful arguments in accounting discourse. In the two cases where theoretical arguments have been used most frequently (inflation accounting and currency translation), regulation has been unsuccessful." (s 545)

But lately regulation has become stricter in Sweden because of Sweden's membership of the EU. The EU had earlier a rather flexible accounting regulation with the policy of mutual recognition between different countries rule systems; What was accepted accounting in one country should be accepted also in the other member countries. The directives on accounting were negotiated products containing a lot of options for the member states and they lacked

regulation on several topics. With the IFRS decree in 2002 this changed dramatically when it was decided that all listed companies registered on a market in Europe should apply the standards of IASB in their group accounts from the year 2005. With the re-organization of international standard setting in 2001 when IASC changed into IASB a new approach of more detailed and strict standard setting started when the Americans were more involved in the new organization. Today the IAS/IFRS system is characterized by more and more standardized rules with lengthy interpretations and application manuals and with many ad hoc rules, i.e. assumptions made of reality for the sake of ease and to restrict the influence of management judgment. Comparability of existing practice has become more important than improvement of accounting¹. Comparability is now fundamental because the basis for the IFRS decree is that standardization of accounting is necessary to make possible a European internal financial market (its importance stressed at the EU Stockholm and Lisbon meetings). Practical men that now have to apply the IAS/IFRS complain about that the rules are “theoretical” and developed by those without practical experience (Dagens Industri; Ratos annual report 2006, p 16-18)

When the Enron scandal struck the USA many Europeans stressed that the European accounting regulation climate with, what was at that time called, a “principles-based” accounting system is preferably compared with the American “rule-based” system. Some even claimed that it was the rule-based American system that had made the Enron fraud possible. Demski (2002) is however opposing such a view:

”To immediately alter the larger fabric of the regulatory structure would give credence to the self-serving explanation that this was a ‘system’ problem. It was not. It is a straightforward case of deceit and dishonesty” (Demski 2002, p 130)

The Americans are with no doubt in favour of a standardized accounting system. The American Accounting Association’s Financial Accounting Standards Committee in a response to IASC’s discussion paper “Shaping IASC for the Future” clearly holds a preference for a strict rule-based system with enforcement and it demands a well developed regulatory infrastructure before they are willing to support IASB (Wahlen et al, 1999). So the attitude from the Americans and also from IOSCO are for more uniformity and this is also the development we have got in Europe and as a member of EU Sweden of course also has to follow this route. The increasing standardization internationally and in Europe has most certainly come here to stay. It is well known that the Americans have a great deal to say in the development of accounting, also internationally (Zeff in Artsberg, 2002)

Issues that address the relationship between accounting and regulation are thus becoming more important, not the least for accounting researchers, but also for social scientists generally because of the impact of accounting on economic efficiency and welfare in society².

¹ That there is a conflict between comparability and improvement has also been observed and discussed by IASB itself (see the new management approach in segmental reporting).

² Arnold (1991) is demonstrating the economic consequences of governmental regulation through the case of the regulation of merger and acquisitions in the US hospital industry. She is demonstrating how the state has the power to set the rules/structures that define the borders within which the different actors find themselves and act according to. There is a lot of power involved here, governmental action while defining the structures “gives” power to some interest group. Governmental regulation is often seen as something that should be for the public good but one may not forget that the government is thus also defining the structure, the playing field for the different actors to operate within and that these actors may not respect the intent of the regulation but rather uses its letter, most often for its own self-interest.

It is important to start reflect upon the consequences on accounting practice if IASB and thus EU moves more and more towards standardization, meaning more strict norms. We are not going to discuss more in this paper what the increasing regulation depends on but we are interesting ourselves for what effects it might have on the content of accounting, and particularly on the innovation of new disclosure practices. As long as accounting has been regulated there has been a discussion whether uniformity or flexibility in regulation is the best way to improve and stimulate the development of accounting practice. Those in favour of uniformity claim that accounting has so considerable economic consequences that in a system with flexible accounting rules, the bad rules will drive out the good rules (Greshams law), and accounting will thus not improve. Another line of reasoning is that with flexible rules the companies will be stimulated to strive for “good” accounting rules. Such stimulating forces can be that companies in order to attract investors start to develop informative and open annual reports. For example, with the growth of the stock market the companies have got an incentive to start a “raise to the top”. One could also claim that if accounting is too standardized the companies are not even allowed to experiment and develop new and better methods. If the regulatory environment is highly standardized the regulatory climate/culture can result in that companies are asking what is allowed instead of asking how accounting can be extended and improved, i.e. we will then get a “raise to the bottom” or at least a stagnation/conserving development.

According to Neal (1997) one should expect that increasing regulation is having an adverse effect on the innovation climate and thus invention of new disclosure techniques.

Also D’Aunno et al demonstrate that regulation codify contemporary practice but does not stimulate change. When something is regulated change is impeded; this is so because regulation means standardization and this is in contradiction with heterogeneity and un-securities that are stimulators for change (D’Aunno et al, 2000). With the case of the adoption of publication of consolidated statements for listed companies in Australia Walker & Mack, (1998) argue, in contradiction with earlier research (that instead has stressed economic incentives), that legislation is necessary in order to get a wider adoption practice. However, they do not discuss whether legislation can hinder development of new ideas and the invention of new accounting techniques. According to most of the literature very few if any accounting inventions are the result of legislation; i.e. we need to distinguish between the invention of accounting techniques and the wider spread/adoption of those techniques, in the latter case legislation can be important as the study of Walker & Mack demonstrates.

Research hypothesis and questions to investigate

In this paper we hypothesize that the regulatory culture is having an impact on voluntary disclosure, we hypothesize that a strict/standardized regulatory climate will lead to a regulatory culture that inhibits the voluntary disclosure while a loose/flexible regulatory climate will encourage experimentation and development of new disclosure practices.

This is a study that in accordance with earlier research has as its starting point the fundamental idea that a country’s regulation culture affects the content of its rules (the reporting culture). Culture is the norms and values of a social system (like in this case the organizational field of accounting in Sweden) that affects the actors in their interactions within and across systems. Two basic questions have to be answered in this study:

1. Is Sweden about to change its reporting culture in accordance with the change in the regulation culture? (We has to test the basic premise)
2. If, how quickly is such a change taking place?

An institutional framework about regulatory culture

Our belief is that actors/organizations have an adaptive behaviour towards environment, this behaviour is not necessarily built on rational economic calculation (like in agency or game theory) but instead stresses that organizations simply adapt to their environment (Axelrod, 1997), i.e. this study has a theoretical perspective built on institutional theory that sees actors as social beings and therefore environmental influences are seen as important. In institutional theory concepts like culture and norms and values are at the very heart of the theorization. Actors are shaped by their environmental culture by internalizing its norms and values. Scott (2001) has summarized the three pillars of institutions, see Table 1. The reason for Scott to draw up that table is to summarize the different contributions and paradigms in different disciplines to the institutional theory. He mentions that economists most likely view institutions as resting primarily on the regulative pillar. The normative pillar was according to Scott embraced by most early sociologists, from Durkheim through Parsons and Selznick but also by much contemporary work by sociologists and political scientists on organizations, for example March & Olsen (1989). Finally the cultural-cognitive pillar is according to Scott stressed by anthropologists but also by some contemporary sociologists, noticeable Berger, Meyer and Zucker. We would like to add psychologists, particularly cognitive psychologists. The cultural-cognitive pillar lends a lot to Berger & Luckmann (1966) that is referred to by most of the writers in this tradition. We are incorporating Scott's model here in order to discuss the interplay between the different pillars. We believe that the different pillars are all important to stress to give a full picture. But let us first explain the different pillars. All the pillars are actually built on some kind of norms and values as a basis for actors to act or to behave.

	<i>Regulative</i>	<i>Normative</i>	<i>Cultural-Cognitive</i>
Basis of compliance	Expedience	Social obligation	Taken-for-grantedness
Basis of order	Regulative rules	Binding expectations	Constitutive schema
Mechanisms	Coercive	Normative	Mimetic
Logic	Instrumentality	Appropriateness	Orthodoxy
Indicators	Rules Laws Sanctions	Certification Accreditation	Common beliefs Shared logics of action
Basis of legitimacy	Legally sanctioned	Morally governed	Comprehensible Recognizable Culturally supported

Table 1. The three pillars of institutions according to Scott (2001)

There is according to Scott's interpretation (with which we agree) a difference in the awareness of the norms. In the regulative pillar norms as manifesting itself in rules and laws are followed with explicit awareness of their beings. They are of course written statements and they are legally sanctioned. The basis for compliance is expedience and the logic for so

doing is instrumentality. Here we have the economic man, that follows rules because they give economic benefit or to avoid punishment. The normative pillar alludes to social obligations that are followed because they are appropriate behaviour (according to some moral standard). This is not something you are forced to do but your social environment expects you to do. Different environments can of course hold different expectations. One kind of codification of such appropriate behaviour is to get a certification or accreditation, but there is also expected behaviour that is never confirmed in such a written form. A profession's behaviour is often steered by such moral obligations and can take both a written and an un-written form. The Code of Conduct that is now introduced is according to our interpretation an example of such normative expectations about corporate governance. Finally, the cultural-cognitive pillar are seen as alluding to those norms that actors are least aware of and therefore we can often here say that people behave, instead of act, according to constitutive schemas that are taken for granted in a specific culture. One example is to shake hand when we meet somebody we know or are introduced to but we do not shake hand with every person we meet on the street. This is a shared logic of action. We learn the behaviour often by mimetic mechanisms, children learn from parents for example how to behave in different environments. In accounting mimetic behaviour has been important in the development of voluntary disclosure. This pillar specifically stresses that behaviours or actions are culturally supported and by culture is meant the norms and values of social systems.

Harrison & McKinnon (1986) look upon accounting regulation as a social system. According to them a social system is characterized by three main elements: interdependence, norms and values, and cultural determinants of behaviour, and these elements should be identified, preferably through the events approach over some decades. Change can be expected to occur because of influences within the system (called endogen influences) or from outside the system, i.e. influences from neighbouring systems (called exogen influences). Harrison & McKinnon suggests a modified exogenous model for their analysis with the following argumentation of the shortcomings of both the other models:

“Exogenous models direct analysis to the potential of external stimuli to initiate change in a system, but they do not accommodate examination of the system's response to those stimuli.”

Their modified exogenous model has four main aspects: intrusive events, intra-systems activity, trans-systems activity and cultural environment. *Intrusive events* are explained to be “events which typically emanate from without the system and disrupt the system's pre-existing pattern” (p 239); example of intrusive events are war, colonization, missionary activities, economic depression, trade and technological exchange, and the international movement of people and ideas. *Intra-systems activity* in a system of regulation is explained to be “the interactions among the specific regulation authorities comprising the system” (p 240); examples of authorities given are governmental, semi-governmental and professional accounting bodies. *Trans-system activity* is described as “the interactions across systems boundaries; i.e. among neighbouring systems. Thus, it is the interactivity between the system of corporate reporting regulation and neighbouring systems such as political, legal and corporate. In addition, it refers to the interactions across those latter systems.” (p 240) Finally, the cultural environment is important because, although it does not generate events to study, it constrains or facilitates change. However, the concept culture is not defined by the authors but it is said that culture influences “1) the norms and values of social systems; and 2) the behaviour of groups in their interactions within and across systems.” (p 239).

We can see that Scott's three pillars of institutions can be related to the Harrison & McKinnon modified exogenous model and that they are both useful as framework to understand

accounting change. Accounting can be affected by all the three pillars in the Scott framework. It is regulated by written rules that are legally sanctioned; It is also affected by professional norms that are expectations of appropriate accounting reporting. Finally it is affected by the specific culture in a country of disclosure behaviour that has evolved voluntarily while companies have mimetic their reporting practice. The cultural-cognitive factor has been particularly important for the development of voluntary disclosure in Sweden.

However, the mix and importance of different regulation forms are different in different countries. Puxty et al (1987) has used the framework of Streeck & Schmitter in order to classify different accounting regulatory models in four countries: Germany, the UK, the USA and Sweden. This model is well known in accounting research and it has even been applied on intangible assets (more specifically R&D) by Willmott et al (1992). Puxty et al's model that stresses three modes of regulation reminds about the Scott framework mentioned above. According to Puxty et al accounting can be regulated by the market where the firms are the predominant actors, if the market is the sole principle for social order then we have liberalism. Today no developed country is relying on the market only to coordinate accounting but USA at the beginning of the 1900 century can be classified as liberalism. Another extreme is that the state is the sole regulator and then we are having legalism. Germany, according to Puxty et al, for a long time came close to such a model with authoritative regulation. The third coordinating force is the community that has as its coordinating principle spontaneous solidarity. No country is relying only on that. If we see professional standard setting as a form of private community initiative then UK is the country that historically came closest to that form. However, Puxty et al prefers to call the earlier UK model for associationism and explain that mode as:

“In relation to accountancy, the presence and influence of professional bodies is the most obvious example of the strategy of Associationism. In this mode, there is some dependence upon principles of Community. However, such principles are routinely subordinated to those of the Market. Membership is founded principally upon calculative rationality rather than a desire to share in common values” (Puxty et al, p 284)

Puxty et al also identifies another mixed mode, a mix between all the three orders of market, state and community as described:

“Here the State does not simply license the existence of organised interest groups but incorporates them into its own centralised, hierarchical system of regulation. In doing so, the state simultaneously recognises its dependence upon these associations and seeks to use them as an instrument in the pursuit and legitimation of its policies.” (Puxty et al p 284)

Corporatism as explained by Streeck & Schmitter is:

“... any attempt to assign to interest associations a distinct role between the State and ‘civil society’ (market and community) so as to put to public purposes the type of social order that associations can generate and embody.” (Streeck & Schmitter 1985, p 20-21)

Sweden is classified as a country using the corporatism model to regulate accounting. At the time when the Puxty et al article was written the BFN and FAR were standard setters given authority through the legislation and in the preparatory work to the legislation. As earlier mentioned the legislation was at that time only a frame law and BFN and FAR were seen as organisations that had to evolve accounting together with practice. While FAR was the private standard setter of the auditors' institute the BFN was actually set up by the government through legislation to be a standard setter where the state could head and influence the private sector. BFN was (and still is) a mixed body between governmental officials and

representatives from the profession and from the industry. While FAR is no longer active as an organizational standard setter the BFN is still setting standards, but only for non-listed companies. Today, as in other member states, the standards for listed companies are set by the private international organisation, the IASB. Since these standards are adopted and authorized by the EU (and indirectly by the member states) we would like to say that also this is a corporatism model. That means that not much has changed in Sweden if we apply the Puxty et al framework on Sweden, we had and still have the corporatism model of regulation. But if we are not so much concerned about who sets the standards we find another aspect of regulation, that is not mentioned in the Puxty et al framework, more important for the regulatory culture/climate, this is whether accounting standard setting is inductive or deductive, i.e. whether it starts in practice or in theory. Here, we claim, there is a large change in Sweden. The new order is very clearly a deductive system; Swedish actors have very little influence on the standards that are set by the IASB and the process in EU to codify them, particularly if compared with the earlier order in Sweden where the norms were built up inductively and where practical experiences and considerations were important. Also the order of enforcement of standards is nowadays totally changed. We do not know about any case before where a company has been brought to court or in some other form “punished” because it has not fully followed the accounting regulation. The IFRS package however comes with a totally new enforcement mechanism. We claim that IFRS has the largest impact on the regulatory culture for Sweden and the UK, among the four countries mentioned by Puxty et al, since accounting in these two countries historically has developed through inductive processes. Germany is affected less in this sense since they are used to a deductive process. The same is the situation for the USA; they have for a long time had a deductive process. One of the main reasons for having an inductive regulatory process is as mentioned in the introduction to standardize accounting. A deductive regulatory process is by definition the same as a standardized system, whether or not the standards are set by the state or by some private body is of minor importance.

According to institutional theory inertia is the natural state in a society since there are so strong forces that favours stabilization and therefore impede change. According to Scott’s model we can identify the three conserving forces as being regulative rules, binding expectations and constitutive schema. All these forces have been demonstrated to favour conservatism and not change. Lately, institutional theorists have started to discuss and investigate why, after all, change can occur. Some factors have been identified as promoters for change. One factor is the existence of a crisis, something does not work any more and therefore people start to look for new solutions as alternatives to earlier practice. Another factor is the existence of several different and competing practices in a society. This last factor is important in our case. When accounting is standardized this factor disappears and we may expect that the actors are becoming less capable to invent new reporting techniques.

As mentioned by Harrison & McKinnon culture can constrain or facilitate change. Concerning the regulatory culture of accounting we can thus draw the conclusion that this has changed in Sweden because of the IFRS decree. Accounting is now highly standardized and it is deductively developed. The new situation should according to the theory make it more difficult to change accounting and give less encouragement and space for companies to voluntarily develop new reporting practices.

Methodological considerations

In order to study the impact of regulation style on the disclosure of intangibles two different methodological designs of the study are possible. One method could be to make a comparative study of two different countries with similar economic development and environment but with different regulation style; another method is to make a longitudinal study in one country that has changed its regulation style over the years. If one has a functional view on regulation one may expect that two countries that are similar and that share a similar view on the objective of accounting also share a similar attitude towards the need of and design of accounting regulation. However, as has been demonstrated comparing the Netherlands and Belgium (Bollen & Nuffel, 1997) this may not be the case. In order to estimate the regulatory attitude there is a need for a review of the history of accounting regulation of that particular country, and that review should not be based on any a-priory assumptions since it can be expected that such a development is complicated embedded in the social environment. Therefore, we have not chosen a comparative study but instead a one country study. We are going to investigate disclosure practices of listed and frequently traded companies over a number of years in Sweden. Even though we are focusing our study on a single country the aim of the study is to draw conclusions of regulatory style, thus since Sweden is following the regulatory style of EU today and since EU has undergone the same kind of change as Sweden, from a flexible to a standardized regulation style it should also be possible to hypothesize on the whole EU regulation out from our study.

Design of empirical study

Selection criteria for companies

The disclosure study focuses on annual reports made by 25 of the largest Swedish companies listed on the Stockholm Stock Exchange. In order for a company to be included in the study it had to be listed during both 1999 and 2005. The companies included in the study represent different industries³, which could enable us to observe industry specific patterns when it comes to disclosure of voluntary information on intangibles. Companies belonging to the bank-, insurance- and investment industries were excluded from the study due to the fact they are answering to different accounting regulations than companies in other industries. See Appendix 1 for a list of the 25 companies from which annual reports⁴ were included in the study.

Disclosure checklist

When it comes to analyse the extent of voluntary disclosure, previous research has shown that a disclosure index is a useful research instrument when it comes to analyse the extent of voluntary disclosure (Marston and Shrides, 1991:207). A disclosure index is based on a disclosure checklist, which includes a number of different items. A review of earlier

³ The companies' industry codes have been collected from the Stock Exchanges' GICS codes (i.e. Global Industry Classification Standard). The GICS coding system is developed by Morgan Stanley Capital International Inc. and Standard & Poor's.

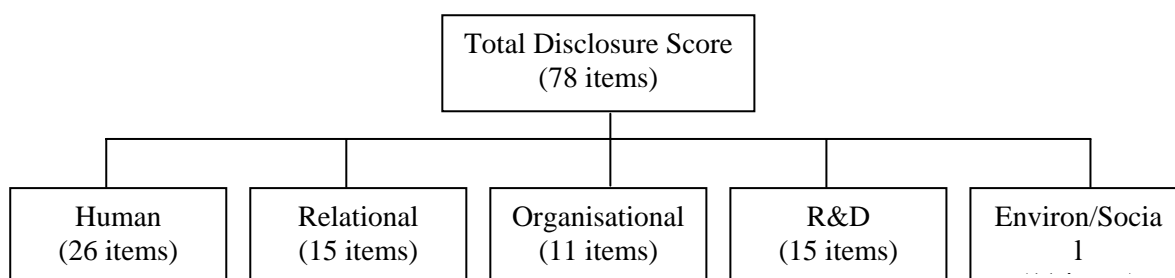
⁴ The analysis focused on the English language version of the annual reports. The choice to focus on the English language version of the reports was intentional since it reduces the potential of a conceptual confusion originated from an analysis including reports written in different languages. A conceptual confusion would risk affecting the stringency of the results from the analysis.

disclosure studies shows that the number of items included in a disclosure checklist varies substantially. For example, Barrett (1976:12) used a checklist of 17 items, while Cooke (1989a:193) included 224 items in his checklist.

The checklist used in the present paper was developed by Arvidsson in her study from 2003. The checklist was developed to be valid in the analysis of the extent of disclosure on intangibles in annual reports. Arvidsson (2003) used an explorative qualitative approach, which included three steps, a review of the literature on intangibles, an analysis of annual reports and finally a review of earlier disclosure checklists. The review of the literature on intangibles was conducted to examine which different categories of intangibles are most frequently discussed while annual reports were analysed to distinguish which categories of intangibles are at focus. These first two steps identified 5 categories of intangibles and a number of different items, which were discussed in relation to each of the 5 categories. The next step in developing the checklist, involved a review of checklists used in earlier disclosure studies.⁵ Tree checklists, Bukh, Nielsen, Gormsen and Mouritsen (2003:29), Adrem (1999: 194-7, 202-6) and Gray, Meek and Roberts (1995:65-68), were most influential on the design of the checklist. The final version of the disclosure checklist includes 78 items, which are related to voluntary information on intangibles (see Appendix 2).⁶ The 78 items are categorised into 5 categories.

The disclosure checklist, see Figure 1, has a hierarchical structure with two levels, i.e. the aggregated level represented by the total disclosure score and the level below represented by the five categories. The notion underlying the use of a hierarchical structure is that the decision relevance of information varies by type and that the variables affecting the choice of disclosure extent also may vary by information type (Meek, Roberts and Gray, 1995:562). Although each of the five categories measures a common entity, i.e. intangibles, they represent five *distinct* categories of intangibles with items that are separable. The categories and their items have been carefully reviewed, e.g. to minimise the probability of double counting.⁷

Figure 1 The hierarchical structure of the disclosure checklist



⁵ The following studies were reviewed in the process of designing the checklist: Bukh, Nielsen, Gormsen and Mouritsen, 2003:29; Adrem, 1999:194-7, 202-6; Inchausti, 1997:49; Courtis, 1996:20-22; Gray, Meek and Roberts, 1995:65-68; Hossain, Perera and Rahman, 1995:86-7; Meek, Roberts and Gray, 1995:569-70; Cooke, 1989a:352-60;1989b:191-5; Chow and Wong-Boren, 1987:537; Barrett, 1976:25; Choi, 1973:170-1; Singhvi and Desai, 1971:138.

⁶ All checklist items represent voluntary information in Sweden.

⁷ In order to determine if the checklist consists of five *distinct* categories with items that are *separable*, Arvidsson (2003) had four independent researchers reviewing the checklist. Their conclusions were that the categories are related, however, distinct and that the items are easy to separate and place in the appropriate category. They regarded the probability of double counting to be negligible.

The first level of the disclosure checklist is represented by the five categories, which are labelled 'Human', 'Relational', 'Organisational', 'R&D'⁸ and 'Environ/Social', respectively. The category 'Human' consists of items focused on information related to board members, directors of the management team and employees. 'Relational' focuses on information related to a company's relationships with, e.g. partners, suppliers, distributors, customers and the public. The category 'Organisational'- consists of items focused on information on knowledge sharing, IT, organisational routines and processes. 'R&D' includes items, which focus on information concerning, e.g. R&D operations, R&D projects, product portfolio and patents. The final category is labelled 'Environ/Social' and consists of items related to a company's policy and agenda for engaging in ethical, environment friendly and socially responsible actions as well as the outcome of these efforts.

On the second level of the disclosure checklist, all disclosure items originated from the five categories are aggregated to a total disclosure score. Thus, the total disclosure score is a measure of the extent of overall disclosure on intangibles in each of the annual reports.

Scoring procedure⁹

The above presented disclosure checklist was used to examine the content of the entire annual report. If the report disclosed information on an item it was assigned 1, otherwise 0. Following the more or less standard procedure in disclosure studies, The relevant/irrelevant technique, which is more or less standard procedure in disclosure studies (see Adrem, 1999:70, Hossain, Perera and Rahman, 1995:77; Cooke, 1989b:183+note3) was applied. The relevant/irrelevant technique means that a company was not penalised if it did not disclose information on an item, which was irrelevant with respect to its business activities. To assess if an item was relevant or irrelevant to a particular company the annual report was studied in detail before the scoring procedure was initiated.^{10 11}

Thus, the disclosure score for each annual report is additive and unweighted. The use of an unweighted scoring technique assumes that each item is of equal importance. By using this technique the subjectivity otherwise involved in assigning weights to the different items when user preferences are unknown is reduced (Adrem, 1999:70; Gray, Meek and Roberts, 1995:54). Considering the critique against using a weighted scoring technique, an additive and unweighted scoring technique has been most commonly used in earlier disclosure studies (see, e.g. Inchausti, 1997:50; Gray, Meek and Roberts, 1995:54; Cooke, 1989b:182). Courtis (1996:7) even goes one step further when he states that the unweighted scoring technique has become the norm in disclosure studies.

⁸ Arvidsson (2003) uses the label 'R&D' in her checklist as a generic concept and although it is closely related to a company's different strategic R&D activities it should not be confused with the R&D function per se. The choice to include a category, which incorporates items similar to the ones incorporated in this checklist, and label it 'R&D' has been a common procedure in earlier disclosure studies (see Bukh, Nielsen, Gormsen and Mouritsen, 2003:29; Meek, Roberts and Gray, 1995:569).

⁹ To ensure the reliability of the study, i.e. that it is apt for replication the disclosure checklist underlying the analysis is presented in its full version in Appendix 2 along with a list of the sample companies (Appendix 1). Although the 79 items are carefully specified, practical problems do arise in the scoring procedure. To mitigate these problems detailed scoring instructions and comments on the actual score related to each item have been drawn up.

¹⁰ For example, if a company only has R&D projects in pre-clinical stages it was not penalised for not disclosing information on items related to product portfolio.

¹¹ To test for the robustness of the scoring results, the scoring was also conducted without the relevant/irrelevant technique being applied. The average disclosure score was less than four percent lower than when the relevant/irrelevant technique was applied. Furthermore, the order of the category-specific scores was the same. Overall the results appear robust.

For each of the annual reports, the disclosure score was calculated as the number of items disclosed in the report divided with the total number of items relevant to the particular company, which the report covers:

$$D_j = \left(\sum_{i=1}^{n_j} \frac{d_{ji}}{n_j} \right)$$

where D_j is total disclosure score for company j , d_{ij} is disclosure item i , which is 1 if the item is disclosed and 0 otherwise and n_j is the total number of items relevant for company j , which the report covers.

Empirical results (Note: First draft)

In this section, the empirical results from the analyses of the annual reports are presented. Table 2 summarises the results of the disclosure scores for the full sample.

Table 2 Summary of disclosure scores

	Year 1999 (n=12)				Year 2005 (n=12)				
	Average	Highest	Lowest	Median	Average	Highest	Lowes t	Median	Trend
Human	0.396				0.471				↑↑
(Relational)	(0.422)				(0.273)				(↓↓)
Organisational	0.455				0.389				↓↓
R&D	0.347				0.344				↓↓
Environ/Social	0.462				0.595				↑↑
Total	0.410				0.415				↑↑

Before commenting on the results presented in Table 2, we would like to emphasise that they are preliminary. First, the researchers are in the process of analysing and discussing their scoring results. Second, less than half of the sample companies have been analysed. Having addressed this issue we turn to the results. Considering the full sample, the companies disclosed on average 41.0 percent of the items in the checklist in 1999. Five years later, in 2005 the disclosure scores exhibit a marginal increase. Studying the scores for the five categories shows us that the companies have increased their voluntary disclosure of information in the categories Human and Environ/Social during the five-year period. The substantial increase of information in the category Environ/Social can be traced back to the ongoing debate related to a company's environmental, ethical and social responsibility. The management teams might have been influenced by the notion that high standards of environmental, ethical and social responsibility are associated with competitive advantage and superior financial returns (see, e.g. Eccles, Hertz, Keegan and Phillips, 2001:167-70; Phillips, 2001:23). The voluntary disclosure of information related to the Organisational category has decreased between 1999 and 2005. Also the companies' disclosure of R&D-information has decreased, however, as with the decrease in Total, this decrease is only marginal and not statistically significant. The scoring results for the Relational category should not be overanalysed.

Discussion and concluding remarks

To be continued...

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Appendix 1 Companies, which annual reports have been included in the study

COMPANIES	INDUSTRY
ABB	
Assa Abloy	
Assi Domän	
AstraZeneca	
Atlas Copco	
Electrolux	
Ericsson	
H&M	
Holmen	
Kinnevik	
OM Gruppen	
SCA	
SKF	
SSAB	
Sandvik	
Scania	
Securitas	
Skanska	
Stora Enso	
Swedish Match	
TeliaSonera	
Trelleborg	
Volvo	
WM-Data	

Appendix 2 Disclosure checklist

	Human (N=26)
1	Name and age of board members
2	Their educational background (academic career)
3	Their work experience (professional career)
4	Comments on the abilities of the Board
5	Name and age of CEO
6	His/hers educational background (academic career)
7	His/hers work experience (professional career)
8	Comments on the abilities of the CEO
9	Name and age of directors of top management team
10	Their educational background (academic career)
11	Their work experience (professional career)
12	Comments on the abilities of the top management team
13	Employees by age
14	Employees by level of education
15	Employees by functionality
16	Rate of employee turnover
17	Comments on changes in employment
18	Comments on the abilities of the employees
19	Recruitment policy
20	Statement of policy on competence development
21	Description of competence development program and activities
22	Statement of policy on employee participation/involvement
23	Statement of dependence of key employees
24	Incentive program – other employees
25	Comments on employee safety and health
26	Employee satisfaction measures
	Relational (N=16)
27	Statement on strategic alliance(s)
28	Objectives and reasons for strategic alliance(s)
29	Description of alliance partner(s)
30	Comments on the effects of the strategic alliance(s)
31	Statement on collaboration agreement(s)
32	Objectives and reasons for collaboration agreement(s)
33	Description of collaboration partner(s)
34	Comments on the effects of the collaboration agreement(s)
35	Description of the network of suppliers and distributors
36	Identification of customer groups
37	Description of customer relations
38	Statement of policy on customer involvement
39	Statement of dependence of key customers
40	Customer satisfaction measures
41	Description of investor relations
42	Statement of policy on external communication activities

	Organisational (N=11)
43	Description of internal communication policy
44	Comments on internal sharing of knowledge and information
45	Description of IT systems
46	Objectives and reasons for investments in IT
47	Statement of organisational culture
48	Statement of image and brands
49	Statement of corporate quality performance
50	Description of investments in organisational routines/processes
51	Comments on organisational flexibility/adaptability
52	Description of status of production technology
53	Comments on production efficiency/capacity
	R&D (N=15)
54	Number of employees in R&D
55	Statement of policy, strategy and/or objectives of R&D activities
56	Comments on the competitive strength of R&D activities in relation to competitors
57	Comments on R&D invested in basic research
58	Comments on R&D invested in product development
59	Description and status of R&D projects by position in pre-clinical/clinical stage
60	Description and status of product portfolio
61	Description and status of license agreements
62	Status of application process registration/sales/FDA
63	Details of company patents
64	Comments on patents pending
65	Assessment of generic competition
66	Statement of policy regarding patent protection
67	Future prospects regarding R&D
	Environ/Social (N=11)
68	Statement of environmental policy
69	Objectives and strategy for environmental program
70	Comments on achievements in environmental program
71	Information on environmental approvals
72	Utilisation of energy, raw materials and other input goods
73	Future prospects regarding environmental program
74	Statement of working environmental and safety policy
75	Statement of policy regarding corporate social responsibility
76	Statement of ethical business policy
77	Description of community involvement
78	Statement of charity policy