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Why reduce profit? - Accounting choice of
impairments in Swedish listed corporations?*

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ABSTRACT

Accounting choice has been explained mainly by two separate theories, positive accounting theory (PAT) and institutional theory (IT). The two theories are used in conjunction in this paper in order to derive an eclectic explanation of accounting choice. We term the effort an “eclectic accounting theory” (EAT). The theory is tested by deriving hypotheses about the choices for determining impairments according to IAS 36 (Impairment of Assets). The hypotheses are evaluated on a sample of 608 company-years of listed Swedish corporations during the years 2002–2004. Our model of general factors influencing accounting choice was able to predict 10% of the variance, indicating that the choice of impairments is induced by general business factors, institutional factors, and agency.

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EXPLAINING PROFIT REDUCTION THROUGH ACCOUNTING CHOICE

Profit, profit; that is Moses and the Prophets—the golden rule of capitalism according to Marx! To reduce profit appears to be highly undesirable action. Yet, not only do market forces reduce a corporation's profit; even the corporation itself can decide to reduce profit. One means is offered by IAS 36 (Impairment of Assets), in which impairments can be made in order to adjust an asset's value to proper market value. Thus, one would expect impairments to appear when there are market-value reasons to make an adjustment. But valuation is not an unambiguous effort as it comprises interpretation of the market and the will of the interpreter and other actors with interests in the interpretation or its consequences (cf. Cullinan, 1999; Astami and Tower, 2006). The decision to reduce profit through the accounting choice of using impairments is obviously a complicated matter. The aim of the present paper is to offer an explanatory account of accounting choice in order to further our understanding of why corporations may choose to reduce profit.

The theory put forward here predicts that accounting choice is made in an institutional context where some institutions influence preferences and cognitions beyond conscious consideration by the decision maker (Neu and Simmons, 1996; Roberts and Greenwood, 1997), i.e., being taken for granted and creating bounded rationality through embeddedness (Granovetter, 1985). Other institutions are considered by the decision maker and are subject to choice (Amihud and Lev, 1981; Oliver, 1991) mainly in order to achieve legitimacy, which enhances such factors as resource access. The decision maker is characterized by individual rationality and gains power by realizing his/her interest using the present distribution of property rights. The property rights distribution is not limited to the traditional principal–agent relationship, but encompasses also professional groups, such as auditors, that have societal and/or market legitimacy that could be considered when making the accounting choice.

The theory we use in order to derive hypotheses about the accounting choice of impairments is an eclectic accounting choice theory, avoiding the theoretical trenches of both institutional theory (IT) and positive accounting theory (PAT). Our theory acknowledges the market conditions that can affect accounting choice: the institutional influence through traditions, conceptions and interest groups (mainly following IT reasoning) and the actors' self-interest (mainly following PAT reasoning).

We present the theory in the context of impairments. In 2002 a regulation was implemented in Sweden which was a direct translation of IAS 36, Impairment of Assets. It contains methods of valuation in order to assure that assets are carried at no more than their recoverable amount. Thus, the assets have to be valued according to subjective criteria, implying a leeway that can be influenced by factors beyond the specific market conditions attributable to the asset. The Swedish regulation has offered an opportunity for corporations to implement IAS/IFRS since 2002, but it was not compulsory to use IAS/IFRS until 2005. Thus, the time span of these three years offers even more leeway than the period before 2002 or after 2004.

The derived hypotheses about impairment are tested on a majority of listed Swedish corporations during the years 2002, 2003, and 2004. Since we can simultaneously consider impact on accounting choice from general business trends and institutions' and actors' self-interest, we can draw conclusions about accounting choice that are, in certain aspects, richer than an investigation using solely IT or PAT.

Our findings indicate that impairments are used to regulate profit, that they are used in the interest of both owners and top management, and that there exists some institutional pressure to make use of the opportunity provided by impairments.

The paper continues with the derivation of the hypotheses concerning accounting choice of impairments. The methods section presents the sample and the operationalization of the variables. Following that is the analysis, where we present the results of multiple regression testing of the hypotheses. The paper ends with a discussion of the empirical findings and concluding remarks about the theory of accounting choice.

AN ECLECTIC THEORY OF ACCOUNTING CHOICE IN THE CONTEXT OF IMPAIRMENTS

The basic assumption of eclectic accounting choice theory is the notion that accounting choice is made out of objective economic reasons originating from general and specific economic trends as well as from regulations. It then acknowledges that choice is made in an institutional context, which consciously or unconsciously influences choice. Finally, the eclectic accounting choice theory focuses on single actors and their self-interest.

Market conditions influencing accounting choice

Accounting choice, such as impairments, will mainly be influenced by ordinary business conditions the firm is facing, such as general business and industry-specific trends. Studies of accounting choice, especially those using a nomothetic approach tend to be cross-sectional, implying that they can observe differences among industries, but cannot observe general business trends. Additionally, to attribute differences among industries to industry-specific business trends is an approximation that is hard to theoretically justify since industry also contains institutional forces, as will be apparent later in the paper. We are trying to include business trends in our model by using data of Swedish corporations from three consecutive years, 2002–2004. Changes over the years are then presumably mostly attributable to general business trends, which influence accounting choice. The general business trend in Sweden was a continuous increase in growth from 2002 to mid-2004, when growth slowed down slightly. If impairments are used more during recessions than during booms, we expect to find a decrease in the usage of impairment over these years.

Regulative changes are part of general business conditions. In Sweden, corporations had to use IAS/IFRS in year 2005 in their consolidated financial reporting, making 2004 the year of preparation for the new regulations. Thus we expect to find differences in the use of impairments between the more ordinary years of 2002 and 2003, and the year 2004. The uncertainty in regulative application is presumably met by passivity, implying a tendency not to use impairments.

The general business trends over the period from 2002 to the end of 2004 can therefore be assumed to influence impairments negatively. Thus, we hypothesize:

H1. Business conditions will influence impairments; for the years 2002 to 2004 impairments will be reduced.

Institutional inertia

Impairment could be interpreted as an indication of taken-for-granted action, i.e., institutional inertia. In Sweden, historical cost accounting and the concept of prudence have a long tradition. Due to reluctance to change and institutional inertia, previously institutionalized norms have the power to survive even though they are no longer functional (Tolbert and Zucker, 1996; Seo and Creed, 2002). This could be explained by the fact that many accountants have invested a lot

of time and effort in learning the existing norm system and therefore actively oppose accounting change (Mellemvik and Olson, 1996). Impregnated by the prudence concept and the historically tight connection between accounting and taxation (e.g., Blake et al., 1999; Nobes and Parker, 2004), Swedish corporations could therefore be expected to use impairment as a device for keeping down the value of assets. However, there is no connection between taxation and consolidated financial reporting. Hence, when confronted with strong international pressure, this institutional behavior can be expected to be reduced as at least the Anglo-American part of the world has used fair value accounting for a long time. These arguments are in line with the results from a study by Tagesson et al. (2005) which shows that (a) financial managers in listed Swedish companies with a large share of foreign ownership and (b) companies quoted on more than one stock exchange were in general more positive towards implementation of IASB standards than those with smaller shares of foreign ownership and companies only quoted on the Stockholm Stock Exchange. Thus, when we find international exposure, we could expect the tendency to use impairments to be reduced, owing to the habit of preparing accounts according to international standards. We then hypothesize:

H2. International exposure of the corporation will be negatively related to impairments.

Normative influence from organizations and groups

Accounting choice can be influenced normatively by strong groups, such as the auditing profession, or by organizations, such as the auditing firms. It has been found, for example, that auditing firms can create specific competences in the firm, making them prone to prefer certain methods (Pentland, 1993; Fischer, 1996). Choices and solutions made during the auditing process in an assignment are stored in the memory of the auditors and could be used in the next assignment. Since auditors work in teams, the specific solutions and choices are transmitted to other auditors in the firm. Organizational diffusion transfers the auditor competence to a competence of the firm, where it can even become a routine. This process is the creation of intellectual capital that in many industries can be a basis for competitive advantage. If this creation of intellectual capital holds true in the case of an auditing firm, we could expect differences in the usage of impairments due to the responsible auditor's organizational habitat. Thus, we hypothesize:

H3. The auditing firm for the corporation will be related to the usage of impairments.

This hypothesis, however, is not flattering to the auditing profession. If auditors belong to a true profession, every auditor will make an independent judgment, based on professional scientific knowledge and not according to the traditions of a specific auditing firm. The intellectual capital of an auditing firm may be concerned with process methods and incentives, but hardly with issues that belong to the profession, such as the use of judgment in applying accounting concepts and standards. A competitive advantage for an auditing firm cannot be created through the firm's application of accounting standards, since it would erode trust in the profession. Thus, we would expect no relationship between the accounting firm and the choice of impairment. This is a null hypothesis to the previous hypothesis. One reason for believing in the null hypothesis in our empirical context, i.e., no relationship between the auditing firm and listed corporations' choice of impairment, is that when research found a relationship between accounting choice and auditing firm it was in another context, namely the context of municipal corporations (Collin et al., 2004). The specific accounting regulations for municipal corporations are rather recent, and the public attention paid to auditing in the municipal area has been small. This contrasts to the case of listed corporations where praxis has been developed over many decades, or even centuries, and auditing has been subject to public scrutiny. Professional norms have gradually developed and have been safeguarded by public attention. This has not been the case for municipal corporations, where norms have yet to become institutionalized. Thus, for listed corporations we expect the presence of professional norms, creating no difference in choice of impairments between different auditing firms.

Institutional pressure could also be present in organizational fields where choices and solutions have become routines, i.e., institutionalized and taken for granted by the firms in the field (e.g., Meyer and Rowan, 1977). An organizational field consists of firms experiencing the same environment, firms with interest alignment in some dimensions, and with some industrial mobility of people between the firms—for example, a common managerial labor market. (DiMaggio and Powell, 1983; Mangos and Lewis, 1995; Inchausti, 1997). Industrial mobility will be conducive to transmit routines within the organizational field. Since impairment concerns valuation of assets, different methods of valuations or attitudes towards what aspects of an asset should be considered in a valuation—hence, the use of impairments—could differ among various organizational fields. The main problem with such a hypothesis is to define the organizational field. As presented here, it is an empirical question: What constitutes the organizational field? (The question thus belongs to the methods section and not the theory section.) One frequently used method of making an approximation of an organizational field is

to define it according to industry. This is a choice we will adopt for this paper, but we admit that it may be a bad choice as it reduces the possibilities of separating institutional pressure from economic pressure.

Industry is defined through the product market, which is a strong divider of human competence in business. Investors tend to specialize according to these divisions. When evaluating a firm, investors tend to compare firms within the same industry, with the argument that they are facing rather similar market situations. Thus, since investors tend to organize firms into industries, firms have to fit this category, for example, by using the same standards as the other firms in the industry. This is the cognitive aspect of institutions. But there is also an economic reason to be similar, and that is the fact that the firms are facing similar market conditions, thus forcing them to act in a similar manner. If the market falls into a strong recession, the firm will tend to examine the possibility of impairments. Therefore, even if using the concept of institutional theory that reality is a social construction, EAT does not disregard the materialistic foundations of any economic theory. If the productive forces, such as the market, have a stronger influence than institutional forces such as fundamental accounting concepts, they will affect accounting choice, and vice versa. Consequently, referring both to institutional forces inherent in organizational fields, and to the economic influence of product markets, we expect to find industry differences in the use of impairments.

H4. The industry of the firm will be related to impairments.

Institutional signaling creates trust

It could at first stance be assumed that managers always avoid impairments since CEOs and other managers prefer good profits. However, this is to ignore how the power distribution of the corporation influences the manager's dependency on the market. When there is a concentrated ownership, there is assumingly a low level of information asymmetry. The dominant investor is close to the corporation and has privileged access to inside information. But when the information asymmetry increases, due to more absent investors, the corporation is more vulnerable to the market's impression of the corporation (Salancik, 1980) and needs to reduce the uncertainty. One way of reducing uncertainty is to make credible informational commitments, for example to signal the use of a widely accepted standard such as IAS 36. The use of impairments will reduce profit, affect the manager's social status in the economic community, and lower the manager's wage if the wage is related to profit. These costs create

the credibility of the signal, i.e., the more costly the action, the more credible is the signal, and therefore the more trust can be placed in the manager and the corporation. We therefore claim that in an effort to create capital market legitimacy, managers might prefer impairments in order to signal a credible informational commitment (e.g., Skinner, 1994).

Market legitimacy is sought when investors are absent and are in a need of credible informational commitment. This absenteeism can be expressed as a matter of dispersed ownership structure, implying that with a dispersed ownership structure, the need for legitimacy increases. This is equivalent to the expression that with a concentrated ownership structure, the need of market legitimacy is low and therefore the need of making credible informational commitments in terms of impairments will also be low. Thus, we hypothesize:

H5. Ownership concentration will be negatively related to impairments.

It should be noted that in reality, where a decision maker cannot act *ceteris paribus*, a corporate decision maker with weak owners prefers to signal trustworthiness by the use of impairment. The decision maker experiences the counterbalancing tendency if the weakness of owners is due to a large share of international owners, thus inducing the decision maker to avoid impairments, as hypothesized in H2. That is, however, an empirical problem.

Aligned interest between the owners and the CEO

Agency theory, which is the theory content of PAT, has a tendency to focus on the conflict between the principal, operationalized as the owner of the shares, and the agent, approximated to the CEO of the corporation (Lambert, 2001). In some situations one may assume an alignment of interest between the owner and the CEO. These are mainly situations when there are other stakeholders that can influence the corporation (Bushman and Smith, 2001). One such case is the capital structure, when both the owner and the CEO have incentives to incur low capital costs. Another case is that of political risk. One of the main PAT predications is that the CEO and the owners have the same interest in avoiding attracting the attention of politicians. The third situation we put forward in this paper is CEO replacement, where the interest of empowering the CEO, especially in relation to the corporate organization, implies interest alignment between the new CEO and the owners.

The capital structure is a blunt mechanism for governing the corporation. Jensen (1993) have claimed that a high debt-to-equity ratio reduces agency costs as it puts pressure on the managers to create the performance that can cover the continuous demands of interest payment. However, the incentive effects have to be balanced against the cost of financial risk since each new euro of debt in a heavily indebted corporation increases interest sharply. The corporation, which includes both the CEO and owners, has cost reasons to reduce the debt-to-equity in order to keep the financiers of debt satisfied. Thus we expect to find that impairments will be avoided in corporations with a high debt burden in order not to increase the ratio and thereby call the attention of debt holders, who may increase the cost of debt because of the increased financial risk. These issues lead to the following hypothesis:

H6. The debt-to-equity ratio will be negatively related to impairments.

The corporation, which includes the CEO and owners, can be confronted with the risk of being subject to political measures that will reduce profit. Since the reduction of profit is created by some costs initiated by a political agency, both actors of the corporation have profit incentives to avoid these political costs. The hypothesis of political costs has been theoretically expressed in PAT by Watts and Zimmerman (1978, 1986) and recently empirically evaluated by Gill-de-Albornoz and Manuel Illuecas (2005). The hypothesis assumes that politicians' interest in paying attention to a corporation and its behavior is related to the size of the corporation and its profits. One reason for this attention could be that with increasing size, the corporation's influence on the economy and on public opinion also increases. On the other hand, it can be assumed that with increasing size follows increasing political power through industry organizations and other business organizations aiming to influence the political sphere. We follow the traditional argument here and assume that with increasing size a corporation has increasing incentives to reduce profit in order to reduce political risk. Thus, we hypothesize:

H7. Size of the firm will be negatively related to impairments.

Finally, a very powerful governance action in a corporation is to replace a CEO. The new CEO arrives as a promise of the future, and in many cases the change is met by an increase in stock market value. It is in the interest of owners to make the new CEO's start as positive as possible and to empower the CEO in such a way that the new CEO can fulfill the promises. One way of empowering the CEO is to create an image of the CEO as being powerful, and having the

capacity to improve the corporation. One method is to reduce the profit when the CEO takes office, i.e., to take a ‘big bath’ (Godfrey et al., 2003; Pourciau, 1993). A low profit implies a need to take action, and a higher profit the following year signals the fulfillment of the initial promises and signals to the organization the arrival of a powerful and strong CEO. Thus, there is an owner interest in empowering a new CEO by reducing profit initially, which can be achieved through the use of impairment. This action could also be in the interest of the CEO, since an increase of profit during the initial years will create a positive signal to the managerial labor market (e.g., Fama, 1980). Additionally, if wage is connected to profit improvement, the profit manipulation will have short-term wealth improvements for the CEO. Apparently, in the case of CEO replacement, there is a communality of interest between the new CEO and the owners. Thus, we hypothesize:

H8. CEO replacement will be positively related to impairments.

CEO opportunism

CEO opportunism appears when there is a lack of alignment between the interest of the owners and the interest of the CEO and others on the top management team (Jensen and Meckling, 1976; Lambert, 2001). This situation is the one focused on in agency theory and therefore in PAT (Watts and Zimmerman, 1978, 1979, 1986). We have touched upon situations where this could be the case. In this part of the derivation of hypotheses we focus on some factors based on the notion of interest misalignment. One such case is the tendency to reduce profit when the profit already is depressed. An implication of this action could be the introduction of a bonus scheme, which is a reallocation of owner’s wealth to the managers in order to align the interest of the managers to that of the owners.

Profitability is a preference of both owners and managers. Profitability is the compensation to owners for their engagement in the corporation as risk capital. For managers, profitability could directly influence their wealth through bonuses. Profitability is also a signal to the managerial labor market of managerial capacity that could improve the managers’ chances to find a new and better position, or, by using the threat of labor market demand to improve their conditions in the present firm. Finally, profitability is a signal to other managers, which can be transformed into status and respect. This would imply that neither the owners nor managers have any incentives to reduce profit by the use of impairments. This alignment of interest is, however, broken when profit is reduced. In that situation the owner has seldom any reason to

hasten the reduction of profit as it will probably hasten the reduction of dividends paid and lower the stock market value of the corporation. A manager, on the other hand, experiences several consequences that could be incentives to hasten the reduction of profit (Healy, 1985; Watts and Zimmerman, 1990). If faced with the risk of having to do impairments in the future, a manager facing reduction of profit could have incentives to bring the impairments forward in time. The increased impairments will reduce the profit to a large extent in the current year, but not in the future. A major decrease in profit this year could therefore create an increase in profit next year. This increase could be interpreted as a signal of managerial capacity, thus later improving the impression of the manager on the managerial labor market and in the managerial society. And if there is a bonus, the decrease in profit before the impairment may still have dropped below the threshold of the bonus, making the manager lose the bonus anyhow. The loss of bonus will not be avoided this year, but the use of impairment this year instead of next year will probably create a bonus for next year. Thus, we expect to find that decrease in profitability will induce impairments. The hypothesis is as follows:

H9. Profitability will be negatively related to impairments.

Bonus is part of the reward system aiming at aligning the interest of the manager with the owner. It is implemented as a means of improving the performance of the corporation, which is of relevance for the owners as it should induce managers to improve performance. As found in the previous hypothesis, it is certainly not a perfect instrument since it can create dysfunctional behavior. Another dysfunctional consequence of bonus is that managers, who have a short time horizon, prefer profit today rather than profit tomorrow (e.g., Lewellen et al., 1987). That implies that managers have a tendency to avoid impairments, even if there were long-run motivation. This is especially the case when managers have bonus plans tied to profitability, and not to sales or other corporate goals. We therefore expect that the usage of impairment will be reduced if there are bonus schemes connected to profit. Thus, the hypothesis is:

H10. Bonus will be negatively related to impairments.

SUMMARY OF THE MODEL

The array of hypotheses in Figure 1 represents our model of accounting choice.

Insert Figure 1 about here

The decision to use impairments is influenced by the market conditions of the firm, the institutional influence through institutional inertia, normative influence and legitimacy, and finally by agency, where there are factors of interest alignment and factors of agency conflict through CEO opportunism. The purpose of the model is to explain the usage of impairment when it is made of economic rational agents, embedded in institutions, and exposed to market conditions. We now turn to the empirical test of the model.

THE EMPIRICAL SAMPLE AND THE OPERATIONALIZATION OF THE VARIABLES

The hypotheses were tested on Swedish listed corporations. Data were collected from the consolidated financial statements in the annual accounts of years 2002, 2003, and 2004 from all Swedish corporations listed on the Stockholm Stock Exchange's A list and O list. Due to lack of information and the fact that corporations did not exist over the whole period 2002–2004, the sample consists of 608 company-year observations (cf. Ruiz-Barbadillo et al., 2004) distributed over 193 corporations from year 2002, 208 corporations from year 2003, and 207 corporations from year 2004, which on average covers about 75% of the listed corporations each year.

Swedish corporations have one account for the parent company and one for the group of corporations. We use the group accounts since they contains the relevant information used by the market actors. In a few cases the corporations do not have the same calendar year as the reporting period. In these cases we coded 2002/2003 as 2002, 2003/2004 as 2003 and 2004/2005 as 2004.

The dependent variable of Impairments has been observed as a relative measurement since the asset structure, and therefore the size of impairments, differs among industries. Impairments are therefore defined as *Actual Impairments/Size of assets that can be subject to Impairments*. In the category of *Assets that can be subject to Impairments* are included intangible assets, tangible assets, and financial assets consisting of shares in subsidiaries and in joint ventures.

The independent variables have been measured as follows:

- *Year*: The years 2002–2004 are represented by dummy variables.
- *International exposure* is represented by (a) foreign ownership: share of foreign ownership, since it reflects international influence through ownership; (b) foreign listing: stock listed on stock markets other than Stockholm, as it reflects exposure to other stock market standards; and (c) foreign subsidiaries: share of subsidiaries that are located outside Sweden, as it reflects exposure to the different countries standards.
- *Auditing firm* is represented by dummies for the four large firms, other firms and one category containing the cases when a corporation had signing auditors from different firms.
- *Industry* is coded according to SIX (Scandinavian Information Exchange), which is also used by the largest newspaper in Sweden, *Dagens Nyheter*, and is represented by dummies.
- *Ownership* is coded in three groups: (1) Controlled by management, which is when no single entity has 5% of the voting rights; (2) Controlled by owners, which is when one or more entities control at least 10% of the voting rights and a representative at the board, or control at least 20% of the shares; (3) Control between these two extremes, which is interpreted as unclear influence. This categorization is rather traditional and follows, for example, Dhaliwal et al. (1982).
- *Debt-to-equity* is defined as $(\text{Debt} + \text{Provisions}) / (\text{Equity} + \text{Minority interest})$.
- *Size* of the firm has been coded as the logarithm of number of employees, as political attention can be affected by how many people are engaged in the corporation. (Balance sheet total and turnover are other proxy variables for size that could be considered).
- *CEO replacement*: a new CEO has been recorded for the year when the CEO signed the first annual report.
- *Profitability* has been defined as $(\text{Profit after financial items} + \text{Financial costs} + \text{impairments}) / (\text{Total capital} + \text{impairments})$. Financial costs are not included since it would reflect the financial structure. Impairments are included since we want profitability independent of impairments.
- *Bonus* has been defined as a dummy, indicating bonus to management related to the profit of the corporation. Bonus related to other objectives has not been recorded as impairment influences profit. Options constitute a reward instrument that is not

connected to profit but to market valuation, thus including expectations and general business trends.

EMPIRICAL TEST OF THE HYPOTHESES OF IMPAIRMENT

Impairments are made on an average of 3% of the value of assets (Table 1). It can therefore not be claimed to be a marginal phenomenon. Profit is influenced; considering the standard deviation of 9.9, the influence is demonstrated in some corporations to a significant degree. Table 1 shows that impairments, as hypothesized, are correlated with years, indicating the presence of economic trends. Some industries such as information technology use impairment to a large extent while manufacturing uses it only to a low extent. Ownership structure, capital structure, size, profitability, and bonus are all, as hypothesized, negatively correlated to impairments, but to different extents. A strong positive correlation can be found with CEO replacement, thus supporting the interest alignment hypothesis (*H8*).

Insert Table 1 about here

Inspecting the means of the independent variables yields an image of Swedish listed corporations as being international in orientation. The foreign ownership is on average 18.9%, almost 10% of the corporations are listed abroad, and of the subsidiaries almost 50% are situated abroad. The variable of auditing firm shows that PricewaterhouseCoopers (PwC) have the strongest market position as auditors and Deloitte & Touche the weakest. The ownership variable indicates high variance, but a dominance of more ownership control. CEO replacement appears to be a rather frequent phenomenon since almost one of five corporations experienced a change. Finally, bonus related to profit is a frequent instrument of rewarding CEOs.

Inspecting the correlation matrix, we find some independent variables correlated; while this is one reason to perform a multivariate analysis, it also creates threats of collinearity problems. One collinearity problem that cannot be avoided is that we use dummy variables for years, auditing firm, and industry, which by definition are correlated. Their correlations are omitted in the matrix since they do not convey important information. A more severe problem is size, as it is correlated with many independent variables such as international exposure, ownership structure, and with some industries. International exposure, as indicated by foreign ownership,

foreign listing, and foreign subsidiaries, are indeed highly correlated. A reliability test indicates, however, that they cannot be regarded as approximations of the same phenomenon (Cronbach's $\alpha=0.35$). Especially the proportion of foreign subsidiaries appears to diverge from the other variables, which can be explained by its being an approximation of international production, while foreign listing and ownership is oriented towards the factor market of capital. A similar test of the three considered variables for size showed that these variables were signs of the same phenomenon (Cronbach's $\alpha=0.94$).

Finally, a natural collinearity problem is that many corporations appear three times in the sample. This becomes especially severe for the variables that do not change between the years, for example, industry and auditing firms. Thus, the model can be expected to have severe collinearity problems when using these variables.

We present four analyses. The "Full model" at the right of Table 2 is the final analysis. The preceding analyses are made in order to show (a) the relative explanatory power of the dominating ideas of accounting choice, i.e., PAT and IT, but mainly (b) the importance of analyzing several variables simultaneously.

Insert Table 2 about here

The market model indicates that general economic trends, including both market and regulations, influence the use of impairment. Years are, however, a very crude proxy and therefore the explanatory power of the variables is very small, though significant, especially when comparing year 2003 with 2004, as the dummy variable of 2004 indicates.

The model including variables considered to be mainly based on institutional arguments, is significant, but at a very modest level, and with low explanatory capacity. A detailed analysis indicates that the explanatory power can be assigned to the huge impairments performed in the IT industry, but especially to the ownership structure variable. PAT advocates would indeed claim that the ownership structure is a variable that should belong to what we term "the agency model," which includes mainly PAT variables. As the derivation of our hypothesis indicates,

the arguments used mainly belong to institutional theory. But, as with many hypotheses, it is hard to claim that the ownership variable solely supports IT or PAT.

It is important to observe the tolerance values of the variables, which indicate collinearity problems with the model, mainly because of the extensive use of the dummies of industry and auditing firm.

The agency model is the best model in many aspects. It has fewer collinearity problems compared to the other models, as indicated by the tolerance values of the variables. The model is highly significant and captures almost 10% of the variance of impairments. Thus, these are the main variables explaining the will to influence profit using impairments. As predicted, CEO replacement is positively correlated and profitability is negatively correlated with impairments. Weakly significant, which can be an indication of the sign of the variable, is correlation of capital structure with impairments.

The full model does to a very small extent improve on the agency model, mainly because of the collinearity problems. We present the full model, however, as two of the variables, foreign ownership and ownership structure, which were derived mainly from IT reasoning, and the general business trend as proxied by years, are significant in the full model. More detailed analysis shows that the variables are fairly stable when the problematic variables are excluded.

The strongest predictors of impairments are CEO replacement and profitability. Less strong, but close to the level of $p=0.05$, are ownership structure and year 2004. Weak correlation was found for capital structure and foreign ownership. All correlations have the expected signs.

DISCUSSION OF THE EMPIRICAL TEST AND THEORETICAL CONCLUSIONS

We have tested an eclectic accounting choice theory on a sample of three years of Swedish listed corporations. In this concluding section we will discuss the different hypotheses in the light of the empirical testing and draw conclusions from the discussion.

Accounting choice is mainly made according to the application of principles in the context of general and firm-specific business conditions. Our crude proxy of general business conditions was able to capture a slight part of the variance in impairments. Improved proxies are needed in order to capture these factors and thereby avoid erroneous interpretations of empirical cases.

The institutional context of accounting choice was considered through the inertia created by the institutional environment. When moving from the Swedish tradition of prudence to an active valuation of assets, an exaggerated use of impairments will be reduced. Our prediction stated that corporations having more international exposure would be more prone to make this movement. This was not the case for share of foreign subsidiaries or foreign listing, but for foreign ownership. In a way, these results are surprising since both in the case of foreign subsidiaries and foreign listing, the corporation has to achieve the competence of international standards. Foreign owners are different as they probably do not put a direct demand on the corporation to apply international standards. This result indicates that the creation of knowledge in a corporation, that of international standards, does not necessarily create traditions and routines that influence the corporation. In the case of foreign ownership, it could be the case that the variable is misplaced. Possibly, a corporation will be more prone to accommodate in a thorough sense when the influence is close to the corporation's main objective—to satisfy the major stakeholders, in this case, the owners. Foreign product markets can create instrumental accommodation, while important stakeholders can induce cultural changes to the organization. This indicates the need to have a more detailed differentiation between instrumental and institutional influence. The speculation here indicates a hypothesis claiming that institutional influence will be stronger if it is carried by important stakeholders.

The normative influence from the interest group of auditor firms did not influence accounting choice. This suggests that there is no corporate competence in the auditor firms that has effect on accounting choice. It can be due to the fact that the auditors are a professional group, where accounting choice is a judgment made from professional norms and not corporate norms. Another possible explanation is that auditors in listed corporations act homogeneously due to institutional pressure from other stakeholders such as investors, mass media, and the Stockholm Stock Exchange Commission. Every year the Commission initiates a special review of all the listed companies' annual financial statements and audit reports. The result of this review is published, and reported errors can lead to much negative publicity for the corporations and auditors concerned. This, however, relates to the null hypothesis, which, it should be stressed, has not been tested.

The normative pressure from the organizational field was tested through the crude proxy of industry. In the full model, no significant correlation could be found. This is somewhat

troublesome since the proxy of industry contains both the institutions of the industry and the specific business conditions. But as we cannot differentiate between institutional influence and specific business conditions, we cannot be sure that traditions do not exist in an industry. This general notion implies the traditional critique of nomothetic approaches in accounting: that it is hard to reveal traditions in these approaches. However, our position is that idiographic approaches, typically using case studies, also face hardship when capturing traditions of an industry as they lack the strength of nomothetic studies, and the possibility to consider the differences among industries.

Ownership structure influenced the size of impairments, which makes it impossible for us to rule out the explanation that impairments could be a signal from the corporation to the absent owners, inducing trust. Notice that this is the case in the full model, where we control for profit; thus it is not a legitimate interpretation that strong owners prefer high profits, and therefore show less tendency to use impairments. Additionally, since we control for size and for capital structure, the relationship is independent of those factors. Therefore we believe that our legitimizing hypothesis has some bearing. It is especially interesting since our sample consists of Swedish corporations that have higher ownership concentration than corporations in the UK and the United States (Lubatkin et al., 2005) and therefore could be expected to have less incentive to legitimize their actions. It has been expected that, given the high ownership concentration in Swedish corporations, the less powerful shareholder minority of the corporations would experience exploitation. Evidence does not support the expectation, and it has been suggested that there is a social control that restrains powerful owners and CEOs from exploiting the minority (Agnblad et al., 2001). Our results indicate that social control is not sufficient but that corporations experience a need to signal trust.

Focusing more on the traditional PAT variables, we hypothesized an aligned interest between owners and CEOs. Two out of three variables were significantly related according to the hypotheses. CEO replacement was the strongest variable. It is tempting to conclude that interest alignment creates the strongest influence, but as profitability, which is an indication of CEO opportunism, also has a strong correlation, this speculation does not hold true. One might also speculate on how to explain the strength of the variable. If it is very common to influence profit when a CEO is replaced, then it is really more of an institutional behavior, i.e., something that has to be done, otherwise a deviation is created that would send a special signal. Accordingly, some of the impairments could be induced by tradition and some according to our argument in

the agency derivation. This speculation supports our contention that any accounting choice theory has to consider both the institutional and the agency perspective in order to be capable of creating an understanding of reality.

Size was not correlated, presumably because it is a variable that is correlated with many other variables. The great number of other variables in our full model reduced the information content of the size variable. The effect is that we have to question the political risk hypothesis of PAT. Studies that have found a correlation could have had under-specified models where size carried information that would have been better and more relevantly contained by other variables.

Finally, our mainstream hypotheses of CEO opportunism were significant for profitability but not for bonus. Executive compensation is indeed a complicated case, and studies have shown only a slight correlation between compensation and performance of the firm (Tosi et al., 2000). Our findings rule out the possible conclusion that CEOs are using impairments in order to improve their own salary. But we do not know if it is because they act in trust of the owners or because they use other means to manipulate their salary. The strong correlation for profitability indicates, however, that they use impairment strongly as a mean of leaving out losses. Bad information drowns in the flood of bad information.

Our main conclusion regarding the case of Swedish listed corporations is that the corporations are using impairments to a certain extent as an instrument to regulate profit. We cannot properly understand this behavior, however, without including considerations of economic trends, institutional forces, and agency. Our empirical test indicates that in order to have a fuller understanding of accounting choice, to explain more situations, and exclude irrelevant variables, we need a more eclectic attitude, as expressed in our eclectic accounting choice theory which was the basis of the derivations of our hypotheses. But even with this more encompassing view of accounting choice, several factors need more elaboration before they can be viable variables in a test.

REFERENCES

- Agnblad, J., Berglöf, E., Höglfeldt, P. and Svancar, H. (2001). Ownership and control in Sweden: Strong owners, weak minorities, and social control, in Barca, F. & Becht, M., *The Control of Corporate Europe*, Oxford University Press, Oxford, pp. 221–258.
- Amihud, Y. and Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers, *Journal of Economics*, 12, 605–617.
- Astami, E. W. and Tower, G. (2006). Accounting-policy choice and firm characteristics in the Asia Pacific region: An international empirical test of Costly Contracting Theory, *The International Journal of Accounting*, 41(1), 1–21.
- Blake, J., Fortes, H., Gowthorpe, C. and Paananen, M. (1999). Implementing the EU accounting directives in Sweden – Practitioners’ views, *The International Journal of Accounting*, 34(3), 421–438.
- Bushman, R. and Smith, A. (2001). Financial accounting information and corporate governance, *Journal of Accounting and Economics*, 32, 237–333.
- Collin, S-O., Tagesson, T., Andersson, A., Cato, J. and Hansson, K. (2004). *Explaining the Choice of Accounting Standards in Municipal Corporations*, Working Paper Series 2004:2. Department of Business Studies, Kristianstad University College. Presented at the 27th European Accounting Association Congress in Prague.
- Cullinan, C. P. (1999). International trade and accounting policy choice: Theory and Canadian evidence, *The International Journal of Accounting*, 34(4), 597–607.
- Dhaliwal, D. S., Salamon, G. L. and Smith E. D. (1982). The effect of owner versus management control on the choice of accounting methods, *The Journal of Accounting and Economics*, 4(1), 41–53.
- DiMaggio, P. J. and Powell, W. W. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organizational fields, *American Sociological Review*, 48, 147–160.
- Fama, E. (1980). Agency problems and the theory of the firm, *Journal of Political Economy*, 88, 288–307.
- Fischer, M. J. (1996). “Real-izing” the benefits of new technologies as a source of audit evidence: an interpretive field study, *Accounting, Organizations and Society*, 21 (2/3): 219–242.
- Gill-de-Albornoz, B. and Manuel Illuecas, M. (2005). Earnings management under price regulation: Empirical evidence from the Spanish electricity industry, *Energy Economics*, 27, 279–304.
- Godfrey, J., Mather, P. and Ramsay, A. (2003). Earnings and impression management in financial reporting: The case of CEO changes, *ABACUS*, 39, 1, 95–123

- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness, *American Journal of Sociology*, 91(3):481–510.
- Healy, P. M. (1985). The effect of bonus schemes on accounting decisions, *Journal of Accounting and Economics*, 7, 85–107.
- Inchausti, B. G. (1997). The influence of company characteristics and accounting regulation on information disclosed by Spanish firms, *European Accounting Review*, 6, 45–68.
- Jensen, M C. and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3, 305–360.
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems, *Journal of Finance*, 48, 831–80.
- Lambert, R. (2001). Contracting theory and accounting, *Journal of Accounting and Economics*, 32, 3–87.
- Lewellen, R. A., Loderer, C. and Martin, K. (1987). Executive compensation and executive incentive problems, *Journal of Accounting and Economics*, 9, 287–310.
- Lubatkin, M. H., Lane, P. J., Collin, S.-O. and Very, P., (2005). Origins of corporate governance in the USA, Sweden and France, *Organization Studies*, 26(6):867-888.
- Mangos, N. C. and Lewis, N. R. (1995). A socio-economic paradigm for analysing managers' accounting choice behaviour. *Accounting, Auditing and Accountability Journal*, 8, 38–62.
- Mellemvik, F. and Olson, O. (1996). *Regenskap i förändring – Utvikling, spredning og bruk av kommuneregenskap*. Oslo: Cappelen Akademisk Forlag.
- Meyer, J. W. and Rowan, B. (1977). Institutionalized organizations: Formal structures as myth and ceremony, *American Journal of Sociology*, 83(2), 310–363.
- Neu, D. and Simmons, C. (1996). Reconsidering the “social” in positive accounting theory: The case of site restoration costs, *Critical Perspectives on Accounting*, 7, 409–435.
- Nobes, C. and Parker, R. (2004). Financial Reporting in nine other important countries, in Nobes, C. and Parker, R. (eds.) *Comparative International Accounting*, 8th ed., London: Pearson Education, pp. 303 – 332.
- Oliver, C. (1991). Strategic responses to institutional processes, *Academy of Management Review*, 16 (1), 145–179.
- Pentland, B. T. (1993). Getting comfortable with the numbers: Auditing and the micro-production of macro-order, *Accounting, Organizations and Society*, 18 (7/8), 605–620.
- Pourciau, S. (1993). Earnings management and nonroutine executive changes, *Journal of Accounting and Economics*, 16, 317-336.

- Roberts, P. W. and Greenwood, R. (1997). Integrating transaction cost and institutional theories: Toward a constrained-efficiency framework for understanding organizational design adoption, *Academy of Management Review*, 22(2), 346–373.
- Ruiz-Barbadillo, E., Cómez-Aguilar, N., De Fuentes-Barberá, C and García-Benau, M. (2004). Audit quality and the going-concern decision-making process: Spanish evidence, *European Accounting Review*, 13(4), 597–620.
- Salancik, G. R. (1980). Effects of ownership and performance on executive tenure in U.S. corporations, *Academy of Management Journal*, 23(4), 653–664.
- Seo, M.-E. and Creed, W. E. D. (2002). Institutional contradictions, praxis, and institutional change: A dialectic perspective, *Academy of Management Review*, 27(2), 222–247.
- Skinner, D. J. (1994). Why firms voluntarily disclose bad news, *Journal of Accounting Research*. 32(1), 38–60.
- Tagesson, T., Dahlgren, M., Gamlén, M. and Håkansson, M. (2005). Swedish financial managers' attitudes towards the implementation of IASB's standards – The relationship between attitudes towards harmonisation and the internationalisation of the corporation, *Financial Reporting, Regulation and Governance*, 4:2.
- Tolbert, P.S. and Zucker, L.G. (1996). The institutionalisation of institutional theory, in Clegg, S.R, Hardy, C. and Nord, W.R. (eds) *Handbook of Organizational Studies*, 18, 261–285.
- Tosi, H. L., Werner, S., Katz, J. P and Gomez-Meija, L.R. (2000). How much does performance matter? A meta-analysis of CEO pay studies', *Journal of Management*, 26, 301–339.
- Watts, R. L. and Zimmerman, J. L. (1978). Towards a positive theory of the determination of accounting standards, *The Accounting Review*, 53(1), 112–134.
- Watts, R. L. and Zimmerman, J. L. (1979). The demand for and supply of accounting theories: The market for excuses. *The Accounting Review*, LIV, 273–305.
- Watts, R. L. and Zimmerman, J. L. (1986). *Positive Accounting Theory*. New Jersey: Prentice-Hall.
- Watts, R. L. and Zimmerman, J. L. (1990). Positive accounting theory: a ten-year perspective, *The Accounting Review*, 65(1), 131–156.

FIGURE 1. A MODEL EXPLAINING THE USAGE OF IMPAIRMENTS

TABLE 1 DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

Variable	Mean	Sd.	1.	2a.	2b.	2c.	3a.	3b.	3c.	3d.	3e.	3f.	4a.	4b.	4c.	4d.	4e.	4f.	4g.	4h.	4i.	5.	6.	7.	8.	9.	10.
0. Impairments	3.06	9.9	-.11 ²	-.04	-.06	-.04	-.06	.03	-.03	.01	.02	.01	-.01	.01	-0.8 ⁴	.13 ²	-.05	.07	-.05	.04	-.05	-.3	-.10 ³	-.12 ²	.21 ¹	-.27 ¹	-.08 ³
1. Year			X	.01	.00	.02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-.03	.04	.00	-.01	.16 ²	.07 ⁴
2. International exposure			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2a. Foreign ownership	18.9	18.4	X	X	34 ¹	34 ¹	04	00	-04	11 ²	-02	-16 ¹	-13 ²	03	00	06	-04	05	02	-05	17 ¹	-47 ¹	05	31 ¹	11 ²	02	22 ¹
2b. Foreign listing	.07	.26	X	X	X	15 ¹	07	-07 ⁴	-07 ⁴	09 ³	05	-07	-03	-03	-02	-10 ²	06	-05	19 ¹	12 ²	-06	-25 ¹	04	36 ¹	00	12 ²	16 ²
2c. Foreign subsidiaries	42.9	31.1	X	X	X	X	02	-08 ³	-02	11 ²	-12 ²	11 ²	-23 ¹	02	12 ²	06	08 ⁴	-06	00	07 ⁴	05	-15 ¹	01	34 ¹	01	15 ²	21 ¹
3. Auditing firm					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3a. Deloitte & Touche	.09					X	X	X	X	X	X	X	-10 ³	03	04	01	00	-01	00	08 ⁴	-06	09 ³	00	-04	00	-03	-05
3b. Ernst & Young	.21						X	X	X	X	X	X	-14 ³	04	05	02	01	06	-12 ³	-03	17 ¹	04	-02	-08 ⁴	04	-08 ³	-05
3c. KPMG Bohlins	.21						X	X	X	X	X	X	10 ³	-10 ³	04	-04	07	07	-07 ⁴	-09 ³	-04	-02	04	06	02	07 ⁴	20 ¹
3d. PWC	.29							X	X	X	X	X	-05	-06	-03	00	03	-11 ²	12 ²	11 ²	00	-11 ²	-07 ⁴	10 ³	02	04	01
3e. Mixed	.12								X	X	X	X	24 ¹	03	-07 ⁴	-03	-13 ²	-06	05	-02	-07 ⁴	-08 ⁴	08 ³	02	02	01	-05
3f. Other firms	.06									X	X	X	-05	12 ³	-05	04	-01	08 ³	03	-07 ⁴	-05	16 ¹	-01	-14 ²	04	-03	-14 ²
4. Industry											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4a. Finance	.18											X	X	X	X	X	X	X	X	X	X	05	16 ¹	-11 ²	-08 ⁴	06	-06
4b. Health care	.1												X	X	X	X	X	X	X	X	X	00	-03	-14 ²	00	-05	-06
4c. Manufacturing	.24												X	X	X	X	X	X	X	X	X	06	-02	24 ¹	-03	10 ³	03
4d. IT	.19													X	X	X	X	X	X	X	X	-03	00	-20 ¹	05	-21 ¹	00
4e. Consumer goods	.11														X	X	X		X	X	X	06	-12 ²	14 ²	00	17 ¹	07 ⁴
4f. Media	.02															X	X	X	X	X	X	-07 ⁴	00	-08 ³	03	-14 ²	03
4g. Primary products	.05																X	X	X	X	X	-12 ²	00	06	05	04	00
4h. Telecom	.07																	X	X	X	X	-05	-02	-02	08 ³	-08 ³	02
4i. Service	.04																		X	X	X	-02	00	07 ⁴	02	05	-01
5. Ownership	1.88	.93																		X	X	X	-02	-25 ¹	-12 ²	02	-27 ¹
6. Debt-to-Equity	1.73	10.2																			X	X	X	09 ³	-09 ³	01	-01
7. Size	2.7	.95																				X	X	X	-07 ⁴	32 ¹	34 ¹
8. CEO replacement	.18																						X	X	X	-16 ²	-04
9. Profitability	-2	32.2																						X	X	X	18 ¹
10. Bonus	.72																								X	X	X

¹: p<0.000; ²: p<0.01; ³: p<0.05; ⁴:p<0.1

TABLE 2 REGRESSION MODELS (n=608)

	Market			Institutional			Agency			Full model		
Variable	b	SE(b)	Tolerance	b	SE(b)	Tolerance	b	SE(b)	Tolerance	b	SE(b)	Tolerance
1. Year 2003	-1.92 ⁴	0.99	0.73							-1.2	0.95	0.71
1. Year 2004	-2.75 ²	0.99	0.73							-1.8 ⁴	0.96	0.70
2. International exposure												
2a. Foreign ownership				-0.04	0.03	0.60				-0.05 ⁴	0.03	0.58
2b. Foreign listing				-1.51	1.72	0.78				-0.40	1.71	0.73
2c. Foreign subsidiaries				-0.01	0.02	0.78				0.01	0.01	0.72
3. Auditing firm												
3a. Deloitte & Touche				-1.54	2.14	0.43				-1.29	2.06	0.43
3b. Ernst & Young				0.34	1.89	0.26				0.51	1.82	0.26
3c. KPMG Bohllins				-0.81	1.89	0.27				0.13	1.84	0.26
3d. PWC				0.28	1.84	0.23				0.71	1.77	0.22
3e. Mixed				0.21	2.06	0.34				0.58	2.0	0.34
4. Industry												
4a. Finance				1.65	2.40	0.19				1.98	2.32	0.18
4b. Health care				2.55	2.48	0.29				1.83	2.41	0.29
4c. Manufacturing				0.95	2.29	0.17				0.66	2.19	0.17
4d. IT				4.76 ³	2.30	0.20				3.31	2.25	0.19
4e. Consumer goods				1.04	2.46	0.26				1.00	2.4	0.26
4f. Media				5.96 ⁴	3.26	0.58				4.04	3.18	0.56
4g. Primary products				-0.28	2.86	0.35				-0.23	2.75	0.39
4h. Telecom				3.27	2.70	0.35				1.77	2.17	0.34
5. Ownership				-1.1 ³	0.50	0.72				-0.97 ⁴	0.50	0.68
6. Debt-to-Equity							-0.07 ⁴	0.04	0.98	-0.07 ⁴	0.04	0.93
7. Size							-0.16	0.45	0.80	0.12	0.53	0.57
8. CEO-replacement							4.12 ¹	1.01	0.97	4.07 ¹	1.03	0.93
9. Profitability							-0.07 ¹	0.01	0.87	-0.06 ¹	0.01	0.77
10. Bonus							-0.62	0.91	0.88	-1.0	0.97	0.77
Constant	4.65 ¹	0.71		4.31	3.19		3.19 ³	1.29		4.31	3.4	
Adj R ²	0.01			0.02			0.098			0.099		
F	4.03 ³			1.72 ³			14.24 ¹			3.69 ¹		

¹: p<0.000; ²: p<0.01; ³: p<0.05; ⁴:p<0.1