Provision of Policy-Relevant Information for Accounting Regulation*

Roland Königsgruber+

Abstract:

Organisations involved in accounting standard setting are being asked to evaluate the economic consequences of proposed new standards. In order to do so they have to rely on information given by interested parties. This paper presents a game-theoretic analysis of parties' incentives to provide or withhold information relevant for public policy decision-making. It concludes that a priori leanings of the institution carrying out the evaluation are important determinants of information provision. Thus the political context in which a standard setter is embedded matters and results of research studies examining lobbying of a national standard setter do not necessarily carry over to the IASB.

JEL: D70, G18, G38, M48

---

* Financial support from the Austria Marshall Plan Foundation's Berkeley Program is gratefully acknowledged.

+ Center for Accounting Research, University of Graz, Universitätsstraße 15 / FE, 8010 Graz, Austria. Tel.: 0043-316-380-7280; Fax: 0043-316-380-9565; e-mail: roland.koenigsgruber@uni-graz.at

Provision of Policy-Relevant Information for Accounting Regulation

Abstract:

Organisations involved in accounting standard setting are being asked to evaluate the economic consequences of proposed new standards. In order to do so they have to rely on information given by interested parties. This paper presents a game-theoretic analysis of parties' incentives to provide or withhold information relevant for public policy decision-making. It concludes that a priori leanings of the institution carrying out the evaluation are important determinants of information provision. Thus the political context in which a standard setter is embedded matters and results of research studies examining lobbying of a national standard setter do not necessarily carry over to the IASB.

JEL: D70, G18, G38, M48

1 Introduction

Financial reporting regulation impacts upon the real economy through the use of accounting information in contracts, for market valuation, and via other channels. Those best informed about the economic effects of proposed new regulatory measures tend to be those affected. Regulators therefore have to rely on the information provided by interested parties. The present paper uses a simple game-theoretic model to analyse the incentives to provide such information or withhold it. The main finding is that even if policy-makers are completely neutral and treat any evidence received impartially their ex ante leanings are important determinants of stakeholder participation in accounting regulation. This implies that the political environment of accounting regulation matters and suggests that results of lobbying studies in accounting standard setting in the national (Anglo-Saxon) contexts do not necessarily carry over to the international arena.

Financial reporting regulation consists of both the setting of accounting standards and the establishment of mechanisms designed to ensure that those standards are consistently applied. In the United States, the legislator mandated the Securities and Exchange Commission (SEC) with these tasks and the SEC in turn delegated the right to set standards to a private sector organisation, the Financial Accounting Standards Board (FASB). In the European Union, a 2002 act known as the IAS regulation (regulation EC 1606/2002) stipulates that publicly traded companies apply standards developed by the International Accounting Standards Board

(IASB) and endorsed by the EU. The same act requires member states to take appropriate measures to ensure compliance with these standards.

Both the FASB and the IASB follow a standard setting process that relies heavily on information given by external parties. Similarly, the SEC, the European Commission, and other public organisms involved in accounting regulation invite public participation to determine economic consequences of proposed regulatory actions.[1] For instance the European Parliament required the European Commission to carry out an effect study of the impact of IFRS 8 Operating Segments before agreeing to an endorsement of that particular standard. The Commission now routinely carries out such assessments which actively seek input from a broad range of constituents, incl. preparers, users, auditors, standard setters, and academics.[2]

The reliance on information given by parties affected by the proposed regulation of course raises an interesting question about the incentives to provide or withhold such information. Evidence about supposed economic effects may be passed on to public officials when it suits the possessor's private objectives and held back otherwise. On the other hand, refusal to provide information, especially by an actor known to be otherwise forthcoming may be interpreted as the information being such that the actor would like to conceal it. In this respect, not providing any information is informative as well. This train of thought is formally analysed in a model where an official seeks input in order to make a public policy decision. In the accounting regulatory context this can be thought of as setting the level of enforcement or the level of discretion allowed in making reporting choices. There are two potential information providers with opposing preferences. E.g., financial statement users may prefer very strict enforcement in order to obtain reliable and comparable financial information whereas preparers would prefer light regulation leaving them some reporting flexibility. The official may be uncertain about the compliance costs caused by the enforcement actions. The preparers in this case would want her to believe that they are high in order to induce the policy setter to set enforcement level low and the users vice versa. The official is also uncertain whether the potential information providers indeed possess the information but

---

1 A discussion of the political and legal context of accounting standard setting can be found in Fleckner (2008) and Koenigsgruber (2009). The standard setters' due process approach is described on their respective websites, http://www.fasb.org/facts/due_process.shtml and http://www.iasb.org/About+Us/How+we+develop+standards/How+we+develop+standards.htm.

2 So called effect studies are published on the Commission's website: http://ec.europa.eu/internal_market/accounting/news/index_en.htm.

knows that can procure it at some cost. If she is not provided the information she rationally interprets this failure to deliver information as a conscious decision and revises her expectations accordingly.

Analysis of the model reveals that information provision strategy chosen by informed actors depends on the official's ex ante beliefs. To continue the example presented above, if the official interprets absence of information as indicative of the real costs of compliance being low then users will have little incentive to expend resources in order to find out the true costs. Preparers, on the other hand, in that case "carry the burden of proof", i.e. they must incur costs of information acquisition in order to convince the official of their case. The official's ex ante beliefs in this respect can be interpreted as her having leanings towards one group of actors. As an example, the European Parliament required an effect study of IFRS 8 Operating Segments before giving its assent to the standard being endorsed in the EU whereas other organisations involved in the process, such as EFRAG, had assented without such a study. One interpretation consistent with this evidence is that EFRAG may be closer to the accounting profession than the European Parliament. In this sense, the political context of reporting regulation matters and this context is quite different between the United States and the European Union, even though the respective standard setters are very similar. The analysis presented therefore suggests that participation in the accounting regulatory process may be quite different between the two jurisdictions even if the underlying economics are not.

The paper contributes to the literature by attributing a more active role to the recipient of lobbying. The extensive literature on lobbying in the context of accounting standard setting generally neglects this aspect by assuming that lobbying somehow influences the probability of one standard setting outcome being preferred over alternatives by the standard setter. The model presented here opens the black box and analyses the effects of assuming a rational interpretation of an actor renouncing to provide information on the part of the public policy official. This extension allows incorporating different political contexts in the analysis. The paper also integrates the separate strands of research on corporate political strategy and accounting lobbying research.

The remainder of the work is organized as follows. Section 2 presents related literature on lobbying in accounting regulation and corporate political strategy. The following section introduces and analyses a game-theoretic model of the information-provision (lobbying) process. Section 4 discusses the results and concludes.

2 Related Literature

2.1 Lobbying Research in Accounting

A substantive literature on lobbying of the accounting standard setter has developed over the last three decades. Most of this literature consists of empirical studies from either the US, Great Britain or Australia.[3] These studies hypothesize that incentives to lobby for or against a particular draft standard stem from compensation contracts or debt contracts written in terms of accounting numbers; expected capital market reactions to financial reporting numbers; and political costs. They usually test for associations between hypothesized incentives to influence an accounting standard and observed lobbying behaviour in the form of comment letters sent to the standard setter. Deakin (1989) shows that management compensation schemes had an impact on the decision to write a comment letter on a FASB exposure draft for an accounting standard on exploration cost in the oil and gas industry. Feroz and Hagerman (1990) examine corporate positions on a proposed FASB standard on Research and Development. They find that managers compensated by accounting based schemes lobbied against the exposure draft while managers compensated by market based schemes lobbied for it. MacArthur and Groves (1993), on the other hand, use data from 20 proposed British accounting standards and find no significant association between executive compensation schemes and observed lobbying behaviour.

Dhaliwal (1982) examines corporate submissions on a proposed FASB standard on interest cost and finds that companies with higher leverage opposed provisions that would lead to lower reported income. Georgiou (2005) also finds an association between observed lobbying and expected costs from debt covenant violation for a sample of forty documents (discussion papers, exposure drafts, working papers and bulletins) issued by the British ASB. Schalow (1995) found no statistically significant association between leverage and lobbying position on a FASB exposure draft on postretirement benefits. Georgiou and Roberts (2004, p. 442) conclude that research results on contractual incentives for lobbying are inconclusive. This may be explained by the fact that private actors have incentives to quickly adapt contracts to changes in the underlying accounting rules, thus diminishing incentives to influence these rules in the first place (Watts and Zimmerman, 1978).

---

3 Among the rare studies examining data from the international standard setter are Kenny and Larson (1993), Guenther and Hussein (1995) and Larson (1997). The only study from the period since the IASB's standards had become mandatory in the European Union is Perry and Nöelke (2005).

Empirical studies suggest that the capital market rewards continuity in reported profits and companies smooth earnings in order to achieve that objective (e.g., Burgstahler and Dichev, 1997; Burgstahler and Eames, 2003; Degeorge et al., 1999). Managers view earnings management in order to smooth reported earnings as legitimate (Bergstresser and Philippon, 2006). However, the public disclosure of an SEC enforcement action lead to significantly increased capital costs (Dechow et al., 1996). Managers thus arguably have a preference for accounting standards that allow reporting of smooth profits. Ang et al. (2000) analyse responses to a planned standard on superannuation benefits and find that volatility of reported income was a major concern. European banks voiced similar concerns when arguing against endorsement of IAS 39 by the European Union (Dewing and Russell, 2008).

A final reason for lobbying in accounting standard setting put forth in the literature are political costs. These are costs that are directly or indirectly caused by the political process. For instance, reporting high income in times of high inflation may lead to calls for public price regulation. Empirical studies show that feared political consequences lead companies to manage earnings downward in order to report low profits. E.g., Han and Wang (1998) show that oil companies reported deliberately low income during the 1990 Gulf crisis. Watts and Zimmerman (1978) argue that political costs are the main driver of corporate lobbying on accounting standards. They test their hypothesis with comment letters sent in response to a FASB exposure draft on inflation accounting and find the results consistent with their explanation.[4] Sutton (1998) uses data from a comparable British draft standard and shows that firms at risk of government investigation are more likely to support an income-decreasing standard.

Studies such as those cited above have been subject to critique because of their methodology. Comment letters are but one means of lobbying and while their easy availability is an advantage for researchers this very same observability may induce managers to choose different means of lobbying if they wish to conceal their intentions. Chung (1999) establishes a formal model of lobbying against proposed standards and shows that incentives to lobby are different when lobbying is observable. Georgiou (2004) uses an anonymous survey and finds that the use of other, less observable means of lobbying are highly correlated with the use of

---

4 McKee et al. (1984) replicate their test with a larger sample and find that the results are less statistically significant.

comment letters. He concludes that comment letters are a good proxy for a company's overall lobbying position.

2.2 Analytical Models in Lobbying Research on Accounting Issues

While a large majority of studies on lobbying in an accounting context is empirical, a number of papers have used economic models in order to establish a theoretical basis for such studies. Amershi et al. (1982) draw on the preference aggregation literature and conclude that rational political behaviour appears to be qualitatively different in a single-period than in a multiperiod model. They are thus concerned that the single-item approach taken by most of the empirical literature is misleading. Sutton (1984) applies a Downsian voting model to accounting standard setting and predicts that producers of financial statements are more likely to lobby than users; large producers are more likely to lobby than small ones; and undiversified producers are more likely to lobby than diversified producers. In a similar vein, Lindahl (1987) uses Olson's theory of collective action to derive insights into how institutional characteristics of industries and the accounting profession encourage or inhibit joint action. Koenigsgruber (2009) argues that the driving force of political lobbying in accounting standard setting is the presence of political veto players. He concludes that since there are more political actors with individual veto powers over standards in Europe than in the U.S. lobbying is more likely to be addressed towards a political body in the European Union. The approach closest to the present paper is taken by Chung (1999). He analyses the involuntary revelation of private information through the act of lobbying. Using a game-theoretic model he shows that the informational effect can have a significant impact on management's lobbying decision. Because of this effect, management may act strategically and refrain from lobbying or lobby even though it is indifferent between outcomes.

2.3 Lobbying on Accounting Issues as Part of Corporate Political Strategy

A different strand of literature situates lobbying on accounting issues as a part of a broader corporate political strategy. Firms' decisions to become politically active is influenced by the attractiveness of the political market, determined by competition in the market and costs and benefits of the issues involved (Bonardi et al., 2005). Hillman and Hitt (1999) present a decision tree of strategy formulation in the political arena. On a general level they distinguish between a transactional approach where firms react to important public policy issues and a relational approach of firms pursuing a long term strategy rather than acting on an issue-by-issue basis. Researchers have come to realize that there are usually a number of potential recipients of lobbying for any given issue. For instance, in regulatory matters an interested party might address the regulator directly, a political body overseeing the regulator, or the court system. It then becomes a relevant question whom to lobby. One of the main conclusions from this literature is the insight that effective corporate political activity is highly context-specific. Nonmarket strategies must be tailored to the institution in which the relevant policy is being set (Baron, 2001).

Holburn and Vanden Bergh (2004, 2007) argue that firms will target their resources at the "pivotal" institution in the policy-making process. For instance, in a certain policy field a regulatory agency may be charged with defining policy. However, its decision can always be overruled by law which implicates the legislator and potentially the executive. Which actor is pivotal in this process, i.e. a change of whose policy preferences will lead to a change in equilibrium outcome, depends on the concrete situation. Koenigsgruber (2009) applies their reasoning to the international accounting context and argues that the political context of standard setting implies that directing lobbying towards a political actor rather than the standard setter will be more attractive in the European Union than in the United States.

Zeff (1978, 1993, 2002, 2006) in a series of articles provides an extensive collection of case studies of political interference in accounting standard setting. Two recent studies take advantage of the availability of comprehensive databases of political campaign contributions in the United States and test for associations between accounting incentives for lobbying and actual donations. Johnston and Jones (2006) demonstrate a significant correlation between lobbying expenditures and incentives to influence a number of contemporary accounting standards. Ramanna (2008) finds that the congresspersons opposed to the FASB's original proposal on goodwill accounting can be linked – using political contributions – to firms opposed to that proposal.

2.4 Information in Public Policy Making

Officials charged with setting public policy often lack the necessary information to make informed decisions. Whether their emphasis lies on enhancing social welfare (the public interest hypothesis) or on securing support among their constituencies (the interest group hypothesis) they can improve their decision-making by obtaining additional information. Advice can reduce uncertainty but may be costly to obtain and is subject to bias (Calvert, 1985). Legislators can delegate authority to specialized agencies with more specific knowledge about the issues at hand. However, in doing so, they trade off an improvement in the information available for decision making with a loss of control over the decision (Sloof, 2000). Legislators can choose the amount of discretion they grant to a subordinate agency and on the means of oversight they exercise (Bawn 1995, 1997). They define the scope of delegation and the instruments available to the agency as well as the institutional setting and rules of procedure the agency has to follow (McCubbins, 1985). Ferejohn and Shipan (1990) distinguish between statutory policy-making where the agency only carries out a policy which is in substance decided by the law-makers and agency policy making under which the agency also take substantive decisions. In the United States, control over agencies is shared by the President and Congress, with neither achieving sole domination (Rourke, 1993). Hammond and Knott (1996) find conditions under which the regulatory agency will have considerable autonomy and establish that control over the agency usually cannot be attributed entirely to either Congress or the President. Given that agencies often have a choice among policy instruments for any substantive decision they can choose this instrument strategically in order to minimize the probability that an oversight body or a court will overrule it (Spiller and Tiller, 1999). In the context of international accountings standard setting, Koenigsgruber (2009) argues that internal fractions in the IASB can use the threat of a subsequent non-endorsement of a standard by the European Union in order to gain leverage.

Starting with McCubbins and Schwartz (1984) scholars have noted that in addition to proactive forms of agency oversight legislator may also adopt a reactive and less centralized stance and enable citizens and interest groups to examine administrative decisions and seek remedies from agencies, courts, and the legislation itself. In response to such "fire-alarm" signals legislators may initiate oversight activities (Hopenhayn and Lohmann, 1996). Such "fire-alarm" oversight works best in the presence of multiple interest groups since competing groups will provide most information at low cost to legislators (de Figueiredo et al., 1999).

Hillman and Hitt (1999) note that on a tactical level firms have two primary means of eliciting a desired action from policy-makers: information provision and direct incentives such as campaign contributions. From a research perspective, analyses of lobbying through information provision are usually grounded in theories of incomplete information whereas analyses of resource provision are generally studied in the context of complete information (Baron, 2001). Direct incentives can be further split into financial incentives and constituency building strategies. These three strategies correspond to the three goods of exchange in political markets: information, money and votes (Hillman et al., 2004).

The majority of research on the political influence of interest groups focuses on the role of money (de Figueiredo, 2002). However, the attention being paid to corporate contributions to political action committees (PAC) may be exaggerated, as firms allocate far more resources to lobbying than to PAC contributions (Milyo et al., 2000). Wright (1990) concludes that lobbying, not monetary contributions, influences policy decisions. More recent research paints a more nuanced picture. Using newly available data, Ansolabehere et al. (2002) find a stronger connection between lobbying and campaign contributions than previous studies. They also show that groups that spend large amounts on lobbying allocate their campaign contributions differently than groups that do not. This is consistent with lobbyists paying monetary contributions in order to gain access to a policy-maker and provide her with information (Lohmann, 1995). Bouwen (2002, 2004a, 2004b) argues that interest groups can gain access by providing "access goods". In the European Union with its understaffed political institutions, information in itself is an access good. In a series of semi-structured interviews, Bouwen (2004b) documents that, consistently with the access goods hypothesis, Members of the European Parliament prefer to talk to representative organizations because they have the best information about their constituencies' domestic and European interest. However, information provision can be used strategically. Bennedsen and Feldmann (2006) conjecture that since not providing information when it is available is a signal in itself, being known to possess the information creates an externality as it raises the cost of "bribing" the decision maker ex post.

3 The Model

A public policy decision maker can improve her decision making by acquiring additional knowledge about the subject matter at hand. Since she does not have sufficient resources to carry out research she has to rely on input given by interested parties. A motivating example might be the effect studies carried out by the European Union before deciding on the endorsement of a new standard promulgated by the IASB. Consistent with practitioners' claims it is assumed that there are high costs to reputation if false information is given. These costs are sufficiently high to prevent lying by lobbyists.[5] However, depending on which communication strategy seems advantageous to them, interested parties possessing information can decide to pass it on or not. There are two lobbyists, A and B whose economic

[5] See Baron and Besanko (1984) for a formal analysis of incentives for information sharing between a lobbyist and a regulator in a continuing relationship.

wellbeing is dependent on the ultimate decision of the policy maker. They thus have an incentive to influence the official's beliefs.

Assume furthermore that the official does not know with certainty whether the potential lobbyists possess the information she requires. The lobbyists know whether they possess the information y (or, equivalently, can acquire it without cost) or if they have to acquire it at a cost. Information procurement has option value because after observing the outcome the lobbyist can decide whether to pass on the information or not. The sequence of actions in this game is presented in the following decision tree:

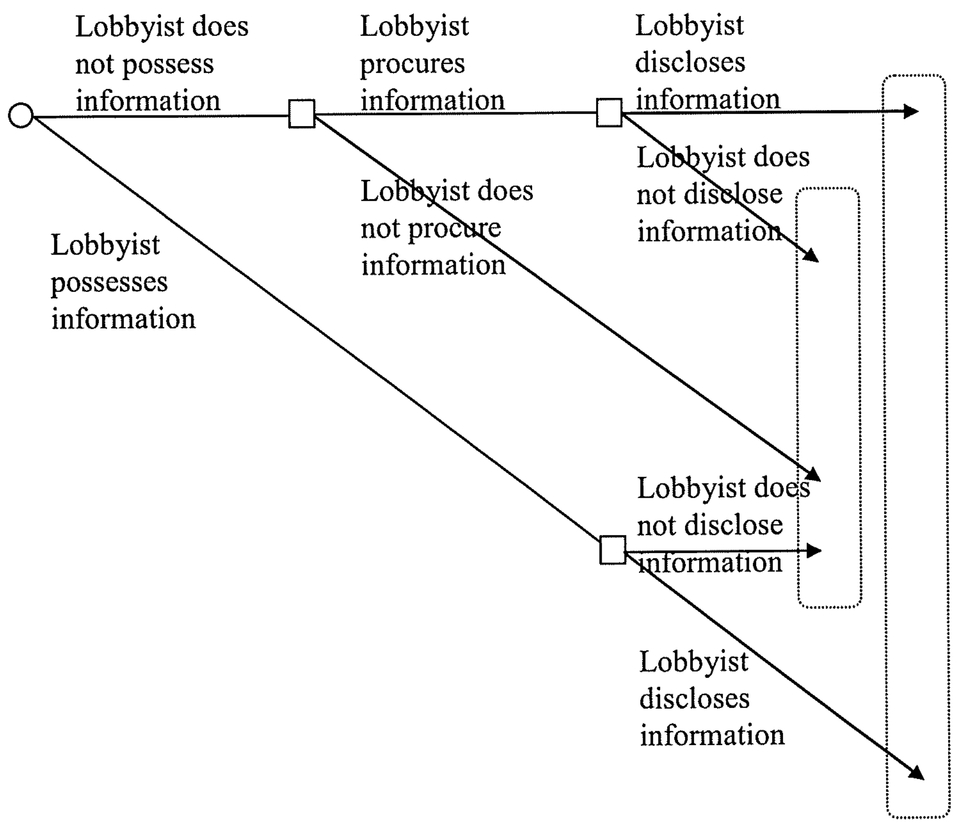

Figure 1: Decision tree

To allow for numerical solution, assume the following: the relevant information can be represented by a single-dimensional variable y distributed uniformly between zero and unity, $\tilde{y} \sim U[0, 1]$.[6] This distribution is common knowledge. A's utility is linearly increasing in the policy decision maker's belief about the underlying variable. Conversely, B's utility is

6 This modelling of information disclosure in the presence of uncertainty about information possession is based upon Jung and Kwon (1988). We follow a simplified rendering proposed in Wagenhofer and Ewert (2007).

linearly decreasing in the policy decision maker's belief about the underlying variable. E.g., financial statement preparers may wish to retain flexibility of reporting[7] and they would therefore like to convince the official of high costs of compliance with a proposed regulation in order to minimize the probability that it gets adopted. Financial statement users have opposite preferences and would want to convince the official of low costs of compliance so that the regulation passes. One can imagine similar conflicting interests between preparers and auditors, etc. If the potential lobbyists do not possess the information y they can acquire it a cost C_A and C_B respectively. The lobbyists' utility can be represented by

(1) $$U_A = E[y] - k_A \cdot C_A$$

(2) $$U_B = -E[y] - k_B \cdot C_B$$

where $E[y]$ denotes the public policy official's expectations (beliefs) about y. k_A and k_B respectively are dummy variables taking a value of unity if the respective lobbyists incur the costs of information acquisition and zero otherwise. Solving the game by backward induction we start with the lobbyists' information disclosure decision. Since they cannot manipulate the information but only disclose it truthfully disclosure implies a revision of the official's expectations about y in the following form:

(3) $$E[y|D] = y$$

where D stands for information disclosure. When deciding on their information provision strategy lobbyists thus compare what they believe to be the policy maker's expectations in the absence of information with their information y. Note that at this point any costs of information procurement are sunk and do not enter the analysis.

(4) $$U_A^{\text{expost}} = \max\left\{\hat{E}[y|N], y\right\}$$

(5) $$U_B^{\text{expost}} = \max\left\{-\hat{E}[y|N], -y\right\}$$

The caret symbolizes the lobbyists' conjectures about the official's expectations. N denotes the non-disclosure of information to the policy maker. If the official is not provided with any

---

7 Former FASB chairman Marshall Amstrong (1977) states that many respondents to FASB discussion memoranda argue from a vested interest in diversity of practice and flexibility of measurement.

information she rationally concludes that either none of the two lobbyists possesses the information (nor acquired it) or that only one of them is in possession of the information but prefers to conceal it. Note that if both lobbyists know y one of them always weakly prefers to reveal it. The official thus rationally revises her expectations by weighting each of the three possibilities (neither lobbyist knows y, A knows y and conceals it, B knows y and conceals it) with its respective probability. It follows from the assumption about y's uniform distribution between zero and unity that the probability of the true information y being revealed to lie below the policy maker's expectations are just these expectations:

$$\Pr\left(y \leq \hat{E}\left[y|N\right] = \hat{E}\left[y|N\right]\right) \tag{6}$$

The ex ante expected value of y is of course ½. Since A (B) will not reveal his information if it lies below (above) $\hat{E}[y| N]$ the expected value of information which A (B) decides not to reveal is $\frac{1}{2}\hat{E}[y| N]$ ($\frac{1}{2} + \frac{1}{2}\hat{E}[y| N]$). In the absence of information, the official thus revises her expectations about y in a Bayesian manner given conjectured probabilities ϕ_A and ϕ_B that the lobbyists individually do not know y. Applying (6) this yields

$$E\left[y|N\right] = \tag{7}$$
$$\frac{\phi_A \cdot \phi_B \cdot \frac{1}{2} + (1-\phi_A) \cdot \hat{E}\left[y|N\right] \cdot \phi_B \cdot \frac{1}{2}\hat{E}\left[y|N\right] + \phi_A \cdot (1-\phi_B) \cdot \left(1-\hat{E}\left[y|N\right]\right) \cdot \frac{1}{2}\left(1+\hat{E}\left[y|N\right]\right)}{\phi_A \cdot \phi_B + (1-\phi_A) \cdot \hat{E}\left[y|N\right] \cdot \phi_B + \phi_A \cdot (1-\phi_B) \cdot \left(1-\hat{E}\left[y|N\right]\right)}$$

Note that this formulation implies the case in which there is only one potential lobbyist (i.e. all lobbyists agree in their objective). In that case either ϕ_A or ϕ_B equals one, i.e. potential opponents are certain not to possess the information y. Perfect Bayesian Equilibrium in the disclosure subgame requires three conditions to hold: (a) the two lobbyists rationally decide whether to disclose the information if they possess it, based on a conjecture about the official's interpretation of non-disclosure. This condition is reflected in (4) and (5). (b) The official revises her expectations in a Bayesian manner, i.e. (7). (c) The lobbyists' conjectures concerning the official's interpretation of non-disclosure are correct:

$$\hat{E}\left[y|N\right] = E\left[y|N\right] \tag{8}$$

(4) – (8) yield Lemma 1:

Lemma 1: In equilibrium the public policy official will revise her expectations following non-disclosure of y to $E\left[Y|N\right]=\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}$. If in possession of the information, lobbyist A will reveal y if it is above that value, while lobbyist B will reveal it if it is below.

∎

Lemma 1 establishes the outcome of the information disclosure subgame. Note that in equilibrium the official's expectation about y increases in ϕ_A and decreases in ϕ_B. Both actors would prefer the official to consider the likelihood that they themselves know y to be as small as possible. At the same time they would each prefer the official to consider the likelihood that the respective other lobbyist knows the information to be as high as possible. The reason for this result is that if the official thinks it very likely that one lobbyist possesses the information she interprets failure by that actor to provide it as indicative of the value of the information being detrimental to that lobbyist's interests and revises her expectations accordingly. The lobbyist then carries the "burden of proof" and has to (acquire and) disclose the information in order to avoid a bad outcome.

The lobbyists can anticipate the outcome of the disclosure subgame when deciding on their information acquisition strategy. (1) and (2) imply that the lobbyists will procure the information if the expected benefits from doing so outweigh the costs. In order to calculate expected benefits of information procurement they take into account its option value: if they obtain the information they can subsequently decide whether to pass it on or not. The expected benefit of information procurement then results from multiplying the probability that the information received is "better" (from the individual lobbyist's point of view) than the official's expectations in the absence of information with the difference between the official's expectations without information and expected value of y if y lies in the range where the lobbyist will disclose it. The lobbyists A and B will acquire the information under the respective conditions

$$(9)\quad \Pr\left(y\geq\hat{E}\left[y|N\right]\right)\cdot E\left[y\middle|y\geq\hat{E}\left[y|N\right]\right]+\left(1-\Pr\left(y\geq\hat{E}\left[y|N\right]\right)\right)\cdot\hat{E}\left[y|N\right]-C_A\geq\hat{E}\left[y|N\right]$$

$$(10)\quad \begin{array}{l}-\Pr\left(y\leq\hat{E}\left[y|N\right]\right)\cdot E\left[y\middle|y\leq\hat{E}\left[y|N\right]\right]-\\ \left(1-\Pr\left(y\leq\hat{E}\left[y|N\right]\right)\right)\cdot\hat{E}\left[y|N\right]-C_B\geq-\hat{E}\left[y|N\right]\end{array}$$

Using (6), (8) and Lemma 1, (9) and (10) can be reformulated:

$$(11)\quad \left(1-\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right)\cdot E\left[y \middle| y \geq \frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right]+\left(\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right)^2 - C_A \geq \frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}$$

$$(12)\quad -\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\cdot E\left[y \middle| y \leq \frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right]-\left(1-\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right)\cdot\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}} - C_B \geq -\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}$$

The uniform distribution of y between zero and unity implies then

$$(13)\quad \tfrac{1}{2}\left(1-\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right)^2 \geq C_A$$

$$(14)\quad \tfrac{1}{2}\left(\frac{\sqrt{\phi_A}}{\sqrt{\phi_A}+\sqrt{\phi_B}}\right)^2 \geq C_B$$

Let p_A and p_B denote the ex ante probability that the lobbyists individually are not endowed with the information y. Note that the relation between p_A and p_B respectively and ϕ_A and ϕ_B is straightforward. Analysing only equilibria in pure information procurement strategies, $\phi_A = p_A$ ($\phi_B = p_B$) if the official believes that the lobbyists do not incur the costs of information acquisition. On the other hand, $\phi_A = 0$ ($\phi_B = 0$) if she believes that they do acquire the information. Equilibrium requires the official's conjectures about lobbyists' information procurement strategies to be correct. That is, in order for information procurement by either actor to be an equilibrium strategy, (13) and (14) respectively must hold given $\phi_A = 0$ ($\phi_B = 0$). Conversely, renouncing to procure the information in equilibrium requires that (13) and (14) respectively must not be fulfilled for $\phi_A = p_A$ ($\phi_B = p_B$). (4), (5), (8) and Lemma 1 imply that if either lobbyist possesses the information with certainty, full information disclosure results (see Milgrom, 1981). This in turn impacts upon the other lobbyist's incentives to expend resources to acquire the information in the first place.

Note that if both lobbyists acquire the information, $\phi_A = \phi_B = 0$, the official's expectation about y in case of non-disclosure is not defined by Lemma 1. An equilibrium combination of information procurement strategies where both lobbyists pay to acquire the information thus requires an assumption about how the official would interpret non-disclosure. Since in this case full disclosure results non-disclosure does not occur in equilibrium and such an assumption is called the official's out-of-equilibrium beliefs. Proposition 1 follows directly from the considerations outlined above.

Proposition 1: The following table outlines necessary conditions for four possible equilibrium combinations of pure strategy information acquisition strategies in lobbying. The resulting equilibrium interpretation of non-disclosure is also presented. The public policy official's out-of-equilibrium beliefs are denoted $E^{ooe}[y \mid N]$.

	B acquires information	*B* does not acquire information
A acquires information	$C_A \leq ½\left(1-E^{ooe}\left[y \mid N\right]\right)^2$ and $C_B \leq ½\left(E^{ooe}\left[y \mid N\right]\right)^2$	$C_A \leq ½$ $E[y \mid N] = 0$
A does not acquire information	$C_B \leq ½$ $E[y \mid N] = 1$	$C_A \geq ½\left(1-\frac{\sqrt{p_A}}{\sqrt{p_A}+\sqrt{p_B}}\right)^2$ and $C_B \geq ½\left(\frac{\sqrt{p_A}}{\sqrt{p_A}+\sqrt{p_B}}\right)^2$ $E\left[y \mid N\right] = \frac{\sqrt{p_A}}{\sqrt{p_A}+\sqrt{p_B}}$

■

For a number of cost levels there exists more than one equilibrium combination of information acquisition strategies. Which one gets chosen depends on the expectations the lobbyists hold about the official's interpretation of non-disclosure. This interpretation becomes self-fulfilling in equilibrium. E.g., with low levels of costs of information acquisition for *A*, if both lobbyists expect the official to interpret non-disclosure as indicative of a low value of the information, $E[y \mid N] = 0$, there are incentives for *A* to expend resources for information acquisition but not for *B*. Then, *A* possesses the information and will disclose it if it is greater than zero and $E[y \mid N] = 0$ is the correct Bayesian revision of expectations. If both lobbyists with opposing preferences obtain the information, one will have an incentive to disclose it. Therefore the revised expectation about *y* following non-disclosure is an out-ofequlibrium belief in the sense that non-disclosure is not an equilibrium strategy. The official's choice of out-of-equilibrium belief determines the upper bound for costs of information acquisition for which it will be preferable for A and B to acquire the information.

The multiplicity of possible equilibria and the implied active role for the public policy official in choosing between them makes establishing an ongoing relationship with the public policy official potentially desirable for the lobbyist. The official's out-of-equilibrium interpretation of non-disclosure of information can be considered as her leanings towards one sector of potential lobbyists. Because interpretations of non-disclosure become self-confirming in equilibrium the official's perceived leanings towards either preparer or user sector (to continue the example from above) determine the outcome. It is indeed the perceptions about his leanings that matter rather than his leanings per se since in equilibrium expectations are correct. Therefore lobbyists will want to be present in public policy preparation if they can influence the official's a priori attitude even when ex post the official obtains her information from the opposing source.

4 Discussion

This paper proposes and analyses a game-theoretic model of information-based lobbying in the presence of information procurement costs on the part of the lobbyist. A public policy official is assumed to be dependent on the input from interested parties in order to make an informed decision. The interaction is assumed to be repeated and reputational concerns are exogenously specified to be important enough to prevent untruthful communication of information. However, information concealment is a possible strategy. Arguably, this modelling represents the situation found in an advisory committee in the European comitology system which provides the Commission with information but does not have any veto power (e.g., Steunenberg, Koboldt and Schmidtchen, 1996. See Bergström, 2005 for a general overview of the comitology system). In the accounting context such procedures are applied in the endorsement process of international accounting standards. In particular, the European Commission, instigated originally by the European Parliament has taken to regularly commission so-called effect studies of major changes to accounting standards before endorsing them. Similarly, the SEC has been mandated by the American Congress to carry out effect studies on fair value accounting in the wake of the 2008 financial crisis.

Analysis of the model shows that information acquisition is costly to the lobbyists there exist different possible equilibrium information procurement and disclosure strategies dependent on the public policy official's interpretation of failure to provide her with information. Influencing these expectations *ex ante* – before a concrete lobbying situation – now allows a potential lobbyist to be better off than by staying at the sidelines. Ex ante expectations can be thought of a leaning towards one group of actors, e.g., an "industry bias", even though the official exhibits a perfectly neutral utility function and does not receive any rewards from that actor.

The model is applicable to a wide range of lobbying situations where the lobbyists' contribution consists in information rather than money. It is, however, based on the assumption of rational revision of expectations on the part of the lobbying's recipient. Since Baysian revision of expectations necessitates priors – a probability distribution over known possible outcomes – it is not well-suited for situations characterized by great novelty and uncertainty. Such situations may be better characterized by heuristic, as distinct from Baysian expectations formation (Fischer and Verrecchia, 2004).

References

Amershi, Amin H., Demski, Joel S., and Wolfson, Mark A. "Strategic Behavior and Regulation Research in Accounting." *Journal of Accounting and Public Policy* 1 (1982): 19–32.

Ang, Nicole, Gallery, Natalie, and Sidhu, Baljit K. "The Incentives of Australian Public Companies Lobbying Against Proposed Superannuation Accounting Standards." *Abacus* 36 (2000): 40–70.

Ansolabehere, Stephen, Snyder, Stephen M., and Tripathi, Micky. "Are PAC Contributions and Lobbying Linked? New Evidence from the 1995 Lobby Disclosure Act." *Business and Politics* 4 (2002): Article 2.

Armstrong, Marshall S. "The Politics of Establishing Accounting Standards." *Journal of Accountancy* 143 (1977): 76–79.

Baron, David P. "Theories of Strategic Nonmarket Participation: Majority-Rule and Executive Institutions." *Journal of Economics & Management Strategy* 10 (2001): 47–89.

Baron, David P., and Besanko, David. "Regulation and information in a continuing relationship." *Information Economics and Policy* 1 (1984): 267–302.

Bawn, Kathleen. "Political control versus expertise: Congressional choices about administrative procedures." *American Political Science Review* 89 (1995): 62–73.

Bawn, Kathleen. "Choosing Strategies to Control the Bureaucracy: Statutory Constraints, Oversight, and the Committee System." *Journal of Law, Economics and Organization* 13 (1997): 101–126.

Bennedsen, Morten, and Feldman, Sven E. "Informational lobbying and political contributions." *Journal of Public Economics* 90 (2006): 631–656.

Bergstresser, Daniel, and Philippon, Thomas. "CEO incentives and earnings management." *Journal of Financial Economics* 80 (2006): 511–529.

Bergström, Carl F. *Comitology. Delegation of Powers in the European Union and the Committee System.* Oxford: Oxford University Press, 2005.

Bonardi, Jean-Philippe, Hillman, Amy J., and Keim, Gerald D. "The Attractiveness of Political Markets: Implications for Firm Strategy." *Academy of Management Review* 30 (2005): 397–413.

Bouwen, Pieter. "Exchanging access goods for access: A comparative study of business lobbying in the European Union institutions." *European Journal of Political Research* 43 (2004a): 337–369.

Bouwen, Pieter. "The Logic of Access to the European Parliament: Business Lobbying in the Committee on Economic and Monetary Affairs." *Journal of Common Market Studies* 42 (2004b): 473–495.

Bouwen, Pieter. "Corporate Lobbying in the European Union: the logic of access." *Journal of European Public Policy* 9 (2002): 365–390.

Burgstahler, David, and Dichev, Ilia. "Earnings management to avoid earnings decreases and losses." *Journal of Accounting and Economics* 24 (1997): 99–126.

Burgstahler, David C., and Eames, Michael J. "Earnings Management to Avoid Losses and Earnings Decreases: Are Analysts Fooled?" *Contemporary Accounting Research* 20 (2003): 253–294.

Calvert, Randall L. "The Value of Biased Information: A Rational Choice Model of Political Advice." *Journal of Politics* 47 (1985): 530–554.

Chung, Dennis Y. "The Informational Effect of Corporate Lobbying Against Proposed Accounting Standards." *Review of Quantitative Finance and Accounting* 12 (1999): 243–269.

De Figueiredo, Rui J. P., Spiller, Pablo T., and Urbiztondo, Santiago. "An Informational Perspective on Administrative Procedures." *Journal of Law, Economics and Organization* 15 (1999): 283–305.

De Figureido, John M. "Lobbying and Information in Politics." *Business and Politics* 4 (2002): Article 1.

Deakin, Edward B. "Rational Economic Behavior and Lobbying on Accounting Issues: Evidence from the Oil and Gas Industry." *The Accounting Review* 64 (1989): 137–151.

Dechow, Patricia M., Sloan, Richard G., and Hutton, Amy P. "Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC." *Contemporary Accounting Research* 13 (1996): 1–36.

Degeorge, François, Patel, Jayendu, and Zeckhauser, Richard. "Earnings Management to Exceed Thresholds." *The Journal of Business* 72 (1999): 1–33.

Dewing, Ian, and Russell, Peter O. "Financial Integration in the EU: the First Phase of EU Endorsement of International Accounting Standards." *Journal of Common Market Studies* 46 (2008): 243–264.

Dhaliwal, Dan S. "Some Economic Determinants of Management Lobbying for Alternative Methods of Accounting: Evidence from the Accounting for Interest Cost Issue." *Journal of Business Finance & Accounting* 9 (1982): 255–265.

Ferejohn, John, and Shipan, Charles. "Congressional Influence on Bureaucracy." *Journal of Law, Economics and Organization* 6 (1990): 1–20.

Feroz, Ehsan H., and Hagerman, Robert L. "Management Compensation, Insider Trading, and Lobbying Choice: The Case of R&D." *Australian Journal of Management* 15 (1990): 297–314.

Fleckner, Andreas M. "FASB and IASB. Dependence despite independence." *Working Paper (on file with author)* (2008).

Georgiou, George. "Corporate Lobbying on Accounting Standards: Methods, Timing and Perceived Effectiveness." *Abacus* 40 (2004): 219–237.

Georgiou, George. "Investigating corporate management lobbying in the U.K. accounting standard-setting process: a multi-issue/multi-period approach." *Abacus* 41 (2005): 323–347.

Georgiou, George, and Roberts, Clare B. "Corporate lobbying in the UK: an analysis of attitudes towards the ASB's 1995 deferred taxation proposals." *The British Accounting Review* 36 (2004): 441–453.

Guenther, David A., and Hussein, Mohamed E. A. "Accounting standards and national tax laws: The IASC and the ban on LIFO." *Journal of Accounting and Public Policy* 14 (1995): 115–141.

Hammond, Thomas H., and Knott, Jack H. "Who Controls the Bureaucracy? Presidential Power, Congressional Dominance, Legal Constraints, and Bureaucratic Autonomy in a Model of Multi-Institutional Policy-Making." *Journal of Law, Economics and Organization* 12 (1996): 119–166.

Han, Jerry C. Y., and Wang, Shiing-Wu. "Political Costs and Earnings Management of Oil Companies During the 1990 Persian Gulf Crisis." *The Accounting Review* 73 (1998): 103–117.

Hillman, Amy J., and Hitt, Michael A. "Corporate Political Strategy Formulation: A Model of Approach, Participation, and Strategy Decisions." *Academy of Management Review* 24 (1999): 825–842.

Hillman, Amy J., Keim, Gerald D., and Schuler, Douglas. "Corporate Political Activity: A Review and Research Agenda." *Journal of Management* 30 (2004): 837–857.

Holburn, Guy L.F., and Vanden Bergh, Richard G. "Influencing Agencies Through Pivotal Political Institutions." *Journal of Law, Economics and Organization* 20 (2004): 458–483.

Holburn, Guy L.F., and Vanden Bergh, Richard G. "Targeting Corporate Political Strategy: Theory and Evidence from the U.S. Accounting Industry." *Business and Politics* 9 (2007): Article 1.

Hopenhayn, Hugo, and Lohmann, Susanne. "Fire-Alarm Signals and the Political Oversight of Regulatory Agencies." *Journal of Law, Economics and Organization* 12 (1996): 196–213.

Johnston, Derek, and Jones, Denise A. "How does accounting fit into a firm's political strategy?" *Journal of Accounting and Public Policy* 25 (2006): 195–228.

Jung, Woon-Oh, and Kwon, Young K. "Disclosure When the Market Is Unsure of Information Endowment of Managers." *Journal of Accounting Research* 26 (1988): 146–153.

Kelly, Lauren. "Corporate Management Lobbying on FAS No. 8: Some Further Evidence." *Journal of Accounting Research* 23 (1985): 619–632.

Kenny, Sara York, and Larson, Robert K. "Lobbying behaviour and the development of international accounting standards: The case of the IASC's joint venture project." *European Accounting Review* 2 (1993): 531–554.

Koenigsgruber, Roland. "A Political Economy of Accounting Standard Setting." *Journal of Management and Governance* forthcoming (2009).

Larson, Robert K. "Corporate Lobbying of the International Accounting Standards Committee." *Journal of International Financial Management & Accounting* 8 (1997): 175–203.

Lindahl, Frederick W. "Accounting Standards and Olson's Theory of Collective Action." *Journal of Accounting and Public Policy* 6 (1987): 59–72.

Lohmann, Susanne. "Information, access, and contributions: A signalling model of lobbying." *Public Choice* 85 (1995): 267–284.

Macarthur, John B., and Groves, Roger E. V. "An Empirical Investigation into the Impact of Profit Sharing Schemes of Executives on the Content of Corporate Submissions on Proposed Accounting Standards." *Journal of Business Finance & Accounting* 20 (1993): 623–638.

McCubbins, Mathew D. "The Legislative Design of Regulatory Structure." *American Journal of Political Science* 29 (1985): 721–748.

McCubbins, Mathew D., and Schwartz, Thomas. "Congressional Oversight Overlooked: Police Patrols versus Fire Alarms." *American Journal of Political Science* 28 (1984): 165–179.

McKee, A. James, Bell, Timothy B., and Boatsman, James R. "Management Preferences Over Accounting Standards: A Replication and Additional Tests." *The Accounting Review* 59 (1984): 647–659.

Milgrom, Paul R. "Good news and bad news: representation theorems and applications." *Bell Journal of Economics* 12 (1981): 380–391.

Milyo, Jeffrey, Primo, David, and Groseclose, Timothy. "Corporate PAC Campaign Contributions in Perspective." *Business and Politics* 2 (2000): Article 5.

Nobes, Christopher, and Robert Parker, eds. *Comparative International Accounting.* Ninth Edition. Upper Saddle River: Prentice-Hall.

Perry, James, and Nöelke, Andreas. "International Accounting Standard Setting: A Network Approach." *Business and Politics* 7 (2005): Article 5.

Ramanna, Karthik. "The implications of unverifiable fair-value accounting: Evidence from the political economy of goodwill accounting." *Journal of Accounting and Economics* 45 (2008): 253–281.

Rourke, Francis E. "Whose Bureaucracy is This, Anyway? Congress, the President and Public Administration." *Political Science and Politics* 26 (1993): 687–692.

Schalow, Christine Marie. "Participation Choice: The Exposure Draft for Postretirement Benefits Other Than Pensions." *Accounting Horizons* 9 (1995): 27–41.

Sloof, Randolph. "Interest Group Lobbying and the Delegation of Policy Authority." *Economics and Politics* 12 (2000): 247–274.

Spiller, Pablo T., and Tiller, Emerson H. "Strategic Instruments: Legal Structure and Political Games in Administrative Law." *Journal of Law, Economics and Organization* 15 (1999): 349–377.

Steunenberg, Bernhard, Koboldt, Christian, and Schmidtchen, Dieter. "Policymaking, Comitology, and the Balance of Power in the European Union." *International Review of Law and Economics* 16 (1996): 329–344.

Sutton, Timothy G. "Lobbying of Accounting Standard-Setting Bodies in the UK and the USA: A Downsian Analysis." *Accounting, Organizations and Society* 9 (1984): 81–95.

Sutton, Timothy G. "The proposed introduction of current cost accounting in the U.K. : Determinants of corporate preference." *Journal of Accounting and Economics* 10 (1988): 127–149.

Wagenhofer, Alfred, and Ewert, Ralf. *Externe Unternehmensrechnung.* 2nd ed. Berlin et al.: Springer, 2007.

Watts, Ross L., and Zimmerman, Jerold L. "Towards a Positive Theory of the Determination of Accounting Standards." *The Accounting Review* 53 (1978): 112–134.

Wright, John R. "Contributions, Lobbying, and Committee voting in the U.S. House of Representatives." *American Political Science Review* 84 (1990): 417–438.

Zeff, Stephen A. "Political lobbying on Accounting Standards – national and international experience." In *Comparative International Accounting.* Ninth Edition, edited by Christopher Nobes and Robert Parker. Upper Saddle River: Prentice-Hall.

Zeff, Stephen A. "The Rise of "Economic Consequences"." *Journal of Accountancy* 146 (1978): 56–63.

Zeff, Stephen A. "The Politics of Accounting Standards." *Economia Aziendale* 12 (1993): 123–142.

Zeff, Stephen A. "“Political” Lobbying on Proposed Standards: A Challenge to the IASB." *Accounting Horizons* 16 (2002): 43–54.