Stakeholder Influence on the Adoption of Assurance in Sustainability Reporting: Evidence from Japan.

Abstract:

(While sustainability reporting (SR) has become a common phenomenon among the world's leading companies, a good number of companies also adopt assurance on such non-financial reporting in order to enhance the credibility of information provided. Japan offers an important opportunity to investigate the assurance practice where almost all the big companies publish SR. In Japan, the adoption of assurance in SR was 26% in 2002, and then increased to 31% before declined to 24% and 23% in 2008 and 2011 respectively. Another important feature of the Japanese companies is the adoption of 'third party comment' (TPC here after) in their reporting instead of or in addition to formal assurance, as KPMG (2008) shows that over 54% of the companies have issued reports with such commentaries. The objective of this study is to explore the corporate level determinants of adoption of assurance and/or TPC in SR in Japan. Stakeholder theory is used to examine the influence of a number of stockholders and consumers on the decision to adopt such third party services. Regression result shows that ownership by financial institutions, foreign investors and final consumers have strong preference to publish SR with assurance and TPC. Company size, industry category and financial performance also have influence on the corporate decision to adopt voluntary assurance and/or TPC in SR. This is the first known study to examine the emerging practices of assurance in SR in Japan).

Key Words: Sustainability Reporting, Assurance, Third Party Comment, Japan

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1. Introduction

Sustainability Reporting (also known as Social and Environmental Reporting or CSR Reporting or Triple Bottom Line Reporting) has become a common phenomenon among the world's leading companies (Deegan, 2002; Simnett et al., 2009, KPMG, 2011). However, this voluntary and unregulated reporting has frequently been criticized for its lack of credibility and completeness (O'Dwyer and Owen, 2005; Adams, 2004; Adams and Evans, 2004). It is argued that management is more concerned about their business opportunities from such reporting rather than ensuring transparency and accountability to stakeholders (O'Dwyer and Owen, 2005). In this context assurance[1] has emerged with the objective to enhance the credibility of the reporting and to ensure the accountability and transparency to external stakeholders (Dando and Swift, 2003). KPMG's[2] (2011) tri-annual survey shows that assurance in sustainability reporting has been increased from 30% to 46% during the period 2005 to 2011. Similarly, CorporateRegister.com's[3] (2008) study also observes an average growth rate of 20% in assurance practice during the period of 1997 to 2007.

This emerging trend has attracted a number of academic observers from social and environmental accounting to analyze the practice (O'Dwyer et al., 2011; O'Dwyer, 2011; Jones and Solomon, 2010; Edgley et al., 2010; Kolk and Parego, 2010; Owen et al., 2000; O'Dwyer and Owen, 2005, 2007; Deegan et al., 2006; Ball et al., 2000). However, the first wave of research on assurance in sustainability reporting (SR here after) was critical in nature, questioning the value addition of the contemporary assurance practices for the external stakeholders (Ball et al., 2000; O'Dwyer and Owen, 2005). These studies are done through content analysis of the assurance statements and show wide variation and inconsistencies in assurance statements as well as lack of rigor and management control over the assurance practices.

Recent studies also inform the deeper understanding of this voluntary audit service (Jones and Solomon, 2010; O'Dwyer, 2011; O'Dwyer et al., 2011). Studies of Edgley et al., (2010); O'Dwyer et al., (2011) and O'Dwyer (2011) focus on the views and perceptions of the assuror about this emerging practice. While O'Dwyer et al., (2011) explain the accounting firms' efforts to gain the legitimacy of such new assurance practice among the key stakeholder groups, the study of O'Dwyer (2011) documents the development of this practice within the accounting firms. Using the dialogic theory, Edgley et al., (2010) note that

[1] IAASB (International Auditing and Assurance Standard Board) (2006) defines assurance as "an engagement in which a practitioner expresses a conclusion designed to enhance the degree of confidence that intended users can have about the evaluation or measurement of subject matter that is the responsibility of a party, other than the intended users or the practitioner, against criteria".

[2] The first survey was published in 1993 by KPGM International. Since then, in total 6 surveys were issued with the latest one in 2008. This survey has been conducted by KPMG in association with the University of Amsterdam.

[3] CorporateRegister.com's data base considered as comprehensive source for sustainability reports including assurance and widely used in academic literature (O'Dywer et al., 2011).

stakeholders are now increasingly included in the assurance process as the practice matures. In contrast to assurors' perspective, Jones and Solomon (2010) and Park and Brorson (2005) examine the managerial perceptions on the assurance of SR in UK and Sweden respectively. In two international comparative studies Kolk and Perego (2010) and Simnett et al., (2009) explain the influence of country level institutional factors on the decision to adopt assurance in SR. Both the studies find that companies operating in countries that are more stakeholders oriented and have a weaker governance enforcement regime are more likely to adopt assurance. In another international study, Darnall et al. (2009) use the stakeholder theory to measure the influence of stakeholders on the corporate decision for different types of environmental audit.

It is seen that there is still dearth of research that examines the assurance practice from the corporate level perspective. As a relatively new practice with limited extant literature it is important to study not only the current extent and quality of assurance practice, but also to study the factors influencing the corporate decision to adopt assurance in SR.

It is not surprising that almost all the previous studies has been from European context without shading light on the rest of the world, as the practice itself is dominant in that context (KPMG, 2008). Japan offers an important opportunity to investigate the assurance practice where almost all the big companies publish SR (KPMG, 2011). In Japan, the adoption of assurance in SR was 26% in 2002, then increased to 31% before declined to 24% and 23% in 2008 and 2011 respectively (KPMG, 2011; KPMG, 2008). Another important feature of the Japanese companies is the adoption of 'third party comment'[4] (TPC here after) in their reporting instead of or in addition to formal assurance, as KPMG (2008) shows that over 54% of the companies have issued reports with such commentaries. In this background, the current study focuses on the corporate level determinants for adoption of assurance and TPC in SR. Although the role of the stakeholders is widely analyzed in SR (Roberts, 1992; Deegan, 2002; Deegan and Blomquist, 2006; Tilt, 2007; Islam and Deegan, 2008), the present study aims to extent the investigation in assurance and/or TPC in SR. This is the first known study to examine the assurance and TPC practices from the Japanese context.

2. Defining 'Assurance' and 'Third Party Comment' on Sustainability Reporting

Although a number of definitions for 'assurance' practice in general exist in the literature, but there is no agreed definition available for assurance in SR (Wilson, 2003; Al-Hamadeen, 2007). Academic studies as

[4] The study defines third party comment as "an engagement in which a third party engaged by the responsible party give a general statement that evaluates or interprets the company's social, economic or environmental performances, underlying management process and related disclosure in the sustainability reports based on his/her subjective judgment rather than objective evaluation".

well as national and international standard setting bodies and voluntary organizations (such as GRI, AccountAbility) set their own operational definitions. However, it is not surprising that all efforts are highly influenced by the language and principles of the financial accounting profession in order to ensure the rigor (Zadek et al., 2004).

Assurance is the most generic and encompassing concept where auditing, verification, review or other form of checking can be considered as the subset of assurance (Gray and Gray, 2000). In this respect, Zadek et al., (2004: 7) note that “auditing, verification and validation are some of the tools and processes by which assurance is obtained”. Gillet (2010) argues that lack of regulated framework and diversity in SR make the use of the term audit difficult in the sustainability context.

Table 1: The relationship between assurance as process and outcome

<table>
<tr><th>Assurance as an outcome
Audience centered</th><th>What Assures?</th><th>Assurance as a process
Organization centered</th></tr>
<tr><td rowspan="2">Stakeholder confidence that the information they have is accurate and complete enough for them to make an informed decision (for example based on an organization’s values, commitments, policies, actions or performance)</td><td></td><td>Formal assurance services
“an evaluation method that uses a specified set of principles and standards to assess the quality of an organization’s subject matter and the underlying systems, processes and competencies that underpin its performance”
(AA1000 Assurance Standard)</td></tr>
<tr><td></td><td>Other means of assurance
• Gossip, word-of-mouth
• Personal statements from those responsible
• Demonstration, see for yourself
• Guarantees
• Quality marks, certification
• Membership of professional bodies and multi-sector initiatives
• Expert authority
• Brand reputation
• Legal liability
• Peer review</td></tr>
</table>

Adopted from Zadek et al., (2006)

Zadek et al., (2006) explain assurance both as a process and as an outcome point of views that are shown in the table 1. An organization has a number of alternatives to provide assurance on a particular subject matter. For example, assurance in SR provided by an accounting firm can be treated as formal assurance. In this case assurance is defined as “an engagement in which a practitioner expresses a conclusion designed to enhance the degree of confidence that intended users can have about the evaluation or measurement of subject matter that is the responsibility of a party, other than the intended users or the practitioner, against criteria” (IAASB, 2006: 229). Similar type of explanation is also adopted by GRI (2006: 38) which defines external assurance as “activities designed to result in published conclusions on the quality of the report and the information contained within it". It argues that the assurance providers should be guided by the professional standards of the assurance or instead they may involve approaches that follow systematic, documented, and evidence-based processes.

Along with this formal assurance, organization has numerous other means of providing assurance to the relevant parties. For example, customer can be assured through advertising and independent product labeling or the stakeholders' confidence can be increased by adding experts' opinion in the SR or organization can adopt ISO 14001 certification to ensure its environmental friendliness. However, from the audience view point the basic purpose of both formal and other means of assurance on SR is to enhance the reliability and credibility of the reported information.

A joint study by MOEJ and JICPA (2007) also distinguishes the assurance from other services like consultancy, advisory or evaluation of SR. They argue that assurance must produces a report containing the assurance providers' conclusion based on evidence they themselves acquire and on relevant criteria, to raise trust in sustainability information for key intended users.

KPMG (2008) observes that instead of formal assurance, a number of companies both at the country and global level are adopting the views or commentary from influential stakeholder groups or experts in their SR. Whether this type of commentary should be treated as assurance or not is a matter of judgment. For example, Al-Hamadeen (2007) in a study on sustainability assurance in UK, excludes the third party commentary statements issued by opinion leaders, NGOs or any other parties because of lack of systematic approach or specific sets of standards and unclear opinion/conclusion. In contrary, Wilson (2003) argues that although systematic and objective evaluation is not undertaken, the aim of these commentaries is to lend credibility to the report and provide assurance to the users, and hence treated as assurance engagement in his study. He considers this type of third party commentary or celebrity endorsement of a report as unsubstantiated assurance, where the third party "issues a subjective evaluation of the subject matter based on their experience or expertise rather than a systematic and detailed evaluation or verification of the underlying performance measurement and management processes" (p. 122). In this case the objectivity and rigor of the assurance process are low and strictly speaking this is not fitted with the assurance definition borrowed from financial auditing field (Zadek et al., 2004).

The prevalence of this type of TPC is higher in Japan than the global and country level practice. Whereas TPC in SR is only 27% and 18% for the G250[5] and N100, more than half of the Japanese companies adopt this service (KPMG, 2008). So, the study decides to investigate the phenomenon and distinction is made between the assurance and TPC.

[5] Global 250 (G250) are the top 250 companies in the Fortune Global 500 companies. In 2008 the list is taken from Fortune Global 500 of the year 2007.National 100 (N 100) companies are the largest companies by revenue in the selected countries.

For the purpose of this study, assurance is defined as "a systematic, documented, and evidence-based process in which a responsible party appoints an independent third party to evaluate and give an opinion on the assertions related to environment, social, and/or economic performance or management against criteria with the objective to improve the credibility of the reporting to intended users". In contrast, this paper defines "third party comment" as "an engagement in which a third party engaged by the responsible party gives a general statement that evaluates or interprets the company's social, economic or environmental performances, underlying management processes and related disclosures in the sustainability report based on his/her subjective judgment rather than objective evaluation".

Based on the above distinction we classify our sample companies in an order. For example, companies that publish SR with both assurance and TPC get the highest rank with the assumption that these companies are more concern about the quality and credibility of their reporting (O'Dwyer and Owen, 2005; Deegan et al., 2006). Accordingly companies that have SR with assurance have the second highest rank and companies with SR that attach TPC and companies that only issue SR without any third party services get the next two ranks respectively. Sample companies that don't have any SR put at the bottom of the ranking.

3. Theoretical Background of SR Practices

3.1. Major theoretical perspectives

There is a variety of theoretical perspectives to be applied to SR. According to Gray et al. (1995a), these perspectives are classified into three broad groups: (1) decision usefulness studies, (2) economic theoryy studies, and (3) social and political theory studies. Among them, the more interesting and insightful theoretical perspectives are those drawn from social and political theory. In fact, theoretical perspectives classified into 'social and political theory' are most widely employed in social and environmental disclosure studies.

Three particular theories—stakeholder theory, legitimacy theory, and political economy theory—are identified in social and political theory studies. However, the differences among these three theoretical perspectives are not critical, and the aspect to be weighted varies.

Stakeholder theory considers that the corporation's continued existence requires the support of the stakeholders, so their approval must be sought and the activities of the corporation adjusted to gain that approval. In other words, the management of different stakeholder groups in the society is critically important for the survival of the organization. Therefore, this theory is likely to accommodate the broadest range of stakeholder groups. In the context of social and environmental reporting, if social responsibility activities are viewed as an effective management strategy for dealing with stakeholders, a positive relationship between stakeholder power, social performance, and social disclosure is expected.

In contrast, legitimacy theory focuses on the aspect of organizational legitimation activities. Legitimacy theory adds conflict and dissention to the picture. In terms of this perspective, social and environmental reporting is considered a measure for companies to legitimate themselves. For example, Patten (1991) employed legitimacy theory for an analysis of the effect of the Exxon Valdez oil spill on the disclosures in the annual reports of petroleum companies. From the viewpoint of legitimacy theory, the petroleum company is expected to disclose more environmental information in the annual report in order to mediate some threats against them arising from the Exxon Valdez accident. His hypothesis was supported, at least for environmental disclosures.

Compared with stakeholder and legitimacy theories, political economy theory has a somewhat broader perspective. Gray et al. (1995) classified political economy theory into classical political economy and bourgeois political economy. While classical political economy is based on Marxian economic theory, which focuses on the legitimacy of the system (in most cases, a capitalist system), bourgeois political economy focuses on the legitimacy of the organization. The legitimacy of the organization is threatened by the unfavourable relationship between the organization and relevant stakeholders. From this perspective, voluntary social disclosures may be undertaken by corporations in order to demonstrate a constructive response to social pressure and avoid further regulation of their disclosure. While political economy theory emphasizes the issues of relative power and regulation to the disclosure framework, most issues raised by this theoretical perspective would be able to be discussed within the framework of legitimacy or stakeholder theory with different theoretical commitments, unless the legitimacy of capitalism is the focus.

The best perspective depends on the study's purpose as well as the stage of research. If there have been many prior studies, the selection of the theory will be influenced by them. However, if the research is in its early stages, which means there is not sufficient existing literature, more general perspectives should be adopted because providing an overview will be more necessary. As discussed above, this is the first study on the adoption of assurance and TPC in SR in Japan, therefore, this study employs stakeholder theory to examine the influence the certain stakeholders on such adoption decision.

3.2. Stakeholder groups in relation to SR

The next question to be posed is 'Who are the stakeholders to be studied?' Donaldson and Preston (1995: 67) define "stakeholders" as "persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity". They identified eight stakeholder groups for a company: investors, customers, employees, suppliers, governments, political groups, communities, and trade associations.

The arguments regarding the relative importance of different stakeholder groups are inconclusive. While Donaldson and Preston (1995) asserted that there is no prima facie priority of one set of interests and benefits over another, Clarkson (1995) proposed the distinction between primary and secondary stakeholders. A primary stakeholder group is one without whose continuing participation the corporation cannot survive as a going concern. Primary stakeholder groups are typically comprised of shareholders and investors, employees, customers, and suppliers, together with what is defined as the public stakeholder group. Secondary stakeholders groups are defined as those who influence or affect, or are influenced or affected by, the corporation, but are not engaged in transactions with the corporation and are not essential for its survival. The media and a wide range of special interest groups are considered secondary stakeholders under this definition.

Roberts (1992) suggested that if social responsibility activities are viewed as an effective management strategy for dealing with stakeholders, a positive relationship between stakeholder power and social performance and social disclosure is expected. According to the previous studies, including Solomon (2000), The Network for Environmental Reporting (NER) (2001), and Kokubu and Hirayama (2004), among the primary stakeholders as defined by Clarkson (1995), customers and final consumers, stockholders and investors, employees, governments and regulators, and local communities are considered to be the main possible users of sustainability reports.

If the data are available, all possible stakeholders should be selected for the analysis. However, in this study it is necessary to convert stakeholders' influence into some quantitative surrogates. Thus, because of the data availability, this paper's analysis focuses on stockholders/investors and customers/consumers as the major stakeholders. Therefore, the purpose of the following analysis is to determine not the most influential stakeholders for adoption of assurance and TPC in SR, but to what extent these estimated primary stakeholders (based on the stakeholder theory) influence such adoption decision.

4. **Development of Hypotheses**

(a) Stockholders/Investors

A number of previous studies (Belkaoui and Karpik, 1989; Roberts, 1992; Cormier and Magnan, 1999; Higashida et al., 2005) evaluate the importance of stockholders or investors in social and environmental disclosure. In these studies, debt-to-equity ratio was selected to analyse the influence of stockholders. The higher the ratio, the less the company depends on stockholders or the more the company depends on creditors. Thus, they focus on how much the company depends on equity or total debt for its financing. While Belkaoui and Karpik (1989), Cormier and Magnan (1999), Higashida et al., (2005), and Liu and Anbumozhi (2009) find negative relationship, however, Roberts (1992) shows positive relationship between debt to equity ratio and corporate social and environmental disclosure.

Other studies like Brammer and Pavelin (2006), Liu and Anbumozhi (2009) and Gamerschlag, et al., (2010) argue that firms with diffused ownership structure will have more incentive to disclose environmental information to a large number of small shareholders than firms with concentrated ownership structure. When ownership is dispersed the demand for voluntary disclosure is high. This might be because voluntary disclosure can play a significant role in reducing asymmetry of information between management and investors in the stock market. On the other hand, in concentrated ownership structure the demand for disclosure is relatively weak, because large shareholders normally obtain information in other ways than through company reports (Chau and Gray, 2002; Chen et al., 2008).

In addition, the study also focuses on the influence of major stockholders like financial institutions, and foreign investors in the decision to adopt assurance and TPC (TSE, 2010). Historically financial institutions play a significant role in the traditional corporate governance system of Japan (Okabe, 2004). Although after the collapse of the bubble economy in the early 1990s, the role of the financial institutions in the traditional corporate governance systems in Japan has decreased (Ahmadjian, 2007; Tanimoto and Suzuki, 2005), still they have the large shareholdings of 29.7% of the total market value of shares in the Tokyo Stock Exchange (TSE) in 2010 (TSE, 2010).Tanimoto and Suzuki (2005) observe the role of traditional corporate governance system in terms of ownership in the adoption of GRI guidelines, however, did not find any significant relationship between the variables. Considering the several socio-economic trends they conclude that traditional system in Japanese corporate sector is dissolving while the influence of the foreign owners is increasing. Nishitani (2009) also observes the role of the different stockholder groups on the initial adoption of the ISO 14001, while differences are seen among the years of adoption only ownership by financial institutions is seen as a significant variable. In a study focusing on the stand-alone environmental report, Kokubu et al., (2012) find that instable stockholders, especially investors in the stock market significantly influence environmental disclosure practices. On the contrary, debt and stable stockholders (such as financial institutions) are negatively related with the disclosure practices.

The role of the foreign investors is also examined by a number of studies in SR literature. Haniffa and Cooke (2005) discuss about the diversity of interest and power of foreign stakeholders in CSR disclosure and find positive relationship between disclosure and ownership by foreign shareholders. Hackston and Milne (1996) also document positive relationship between multiple overseas listings and social disclosure. They consider reporting regulation or cultural demand for more reporting in UK, USA and Canada as the reasons for increased disclosure. Ownership of Japanese firms by foreign investors has increased over the last two decades. Indeed, the proportion of stock held by foreign investors increased from 4.2% in 1990 to 22.5% in 2009. Foreign investors in Japan are mainly institutional investors from the US and the EU. Therefore, foreign investors are often used as a proxy for institutional investors in analyses. The above discussion raises a number of hypotheses:

H_1: There is a significant relationship between corporate debt and adoption of assurance and/or TPC in SR.

H_2: There is a significant relationship between the instable stockholders and adoption of assurance and/or TPC in SR.

H_3: There is a significant relationship between the ownership held by financial institutions and adoption of assurance and/or TPC in SR.

H_4: There is a significant relationship between the ownership held by foreign corporations and adoption of assurance and/or TPC in SR.

(b) Final Consumers

Cowen et al. (1987, p. 113) suggests that companies in consumer-oriented industries are expected to exhibit greater concern to improve the corporate image among their consumers, which in turn would ultimately improve their turnover. Similarly Bowman and Haire (1975, p. 55) argue that consumer oriented companies are more immediately pressed by external forces, and to be successful, they need to be more sensitive, responsive, and adaptive, and cope with these pressures (p. 55). Campbell et al., (2006) used proximity to end or tertiary user to measure public profile companies. Kokubu et al. (2002), Park (1999) and Higashida et al. (2005) employs the advertising cost ratio in the analysis as a variable related to the strength of final consumer relations, and find a positive relationship between the advertising cost ratio and environmental disclosure (also see Kokubu et al., 2011; Nishitani, 2009). Therefore, the hypothesis is:

H_5: There is a significant relationship between the final consumers and the adoption of assurance and/or TPC in SR.

(c) Control variables

(i) Firm size

Extant literature observes that the corporate size is an important explanatory variable for SR. In a recent review, Fifka (2011) shows that 87% of the published studies that has taken size as an explanatory variable for social and environmental disclosure found positive relationship. Several studies explicitly cited firm size as a proxy for organizational visibility (Patten, 1991, 1992, 2002; Hackston and Milne, 1996; Cormier and Magnan, 2003). Due to their high visibility larger companies are more susceptible to public scrutiny. The public pressures for these visible firms may come in the form of concerns of general public or as regulatory burden or political intervention. Social and environmental reporting is seen as a way to minimize the public pressures by showing the corporate commitment towards society and thereby creating a positive public image (Patten, 1991). A number of measures are used for corporate size such as total assets, market capitalization, number of employees, total profits, number of branches/subsidiaries etc. as there are no theoretical reasons which clearly justify choosing of a particular measure of size (Hackston and Milne, 1996).

With respect to assurance statements, Simnett et al. (2009) and Kolk and Perego (2010) in their international comparative studies control the variable firm size, with Simnett et al., (2009) show significant relationship and Kolk and Perego (2010) find company size as insignificant in determining the company's decision to adopt assurance on SR. Descriptive statistics also find that size is an important determinant although there are regional variations among the relationship between size and assurance practices (CorporateRegister.com, 2007).

(ii) Industry affiliation

Another variable that is frequently used in the SR literature as a proxy for public pressure or visibility is industry classification (Patten, 1991). Environmental sensitive industries, like manufacturing firms are more visible than others because of their high pollution intensity, more regulatory burden, intense media scrutiny and public concern (Brammer and Pavelin, 2006). As a result, it is expected that such environmental sensitive industries will have more incentive to disclose social and environmental information in order to assure the stakeholders about its activities and projecting a positive social image (patten, 1991). The review of Fifka (2011) reveals that around 90% of the studies that utilize industry classification to explain the disclosure practice have shown the influence of such classification on the disclosure practice. With regard to assurance practice, Simnett et al., (2009) note that the demand for assurance was higher among companies in mining, utilities, and finance industries. KPMG (2008) also documents that voluntary assurance was highest among companies operating in the mining, utilities, and oil and gas industries.

(iii) Profitability

The relationship between corporate profitability or financial performance and social and environmental disclosure is inconclusive (Bowman and Haire, 1975; Cowen et al., 1987; Cormier and Magnan, 1999; 2003; Cormier et al., 2004; Hackston and Milne 1996; Hibiki et al., 2003; Patten, 1991; Roberts, 1992; Magness, 2006). Some argue that profitable firms have more social constraints, public exposure and affected by political costs, so they have to explain that they operate within the explicit/implicit norms of the society and profit has not been at the expense of the society (Gamerschlag et al., 2010; Branco and

Rodrigues, 2008; Haniffa and Cooke, 2005; Bewley and Li, 2000). Patten (1991) on the other hand argues that economic performance only ensures economic legitimacy, whereas social disclosure should be a function of social legitimization. Therefore, disclosure should be more closely related with public pressure variables like size or industry classification rather than profitability. Similarly, Neu et al., (1998) argue that unprofitable firms have more incentive to disclose social information either to deflect attention from poor financial performance or to indicate that environmental investments will result in long-term competitive advantages.

5. Research Method

5.1. Sample design and data collection

The sample of this study consists of the Nikkei 500 companies drawn on October 25, 2011 from the Nikkei NEEDS-Financial QUEST. The Nikkei Stock Average publicly known as the Nikkei 500 is Japan's most widely watched index of stock market activity that is a simple price-weighted arithmetic average of the 500 component stocks those are among the most actively traded issues on the first section of the Tokyo Stock Exchange (TSE). This is a cross sectional study deals with the adoption of assurance and TPC practices for the year 2010. Assurance and TPC practices are relatively new and casual relationships among the variables are not yet straightforward (Kolk and Perego, 2010; Simnett et al., 2009). As an exploratory study, this cross sectional study shed lights on the corporate level determinants of the adoption of assurance and TPC in SR. While longitudinal study can highlight the change in the practices, however, it is argued that to do an in-depth long term analysis the practice itself needs to have consistence number of waves (Menard, 1991). The study first excludes the companies in finance industry as those have different accounting standards and that reduced the sample to 447. The dependent variable is determined by the explanatory variables of the previous year as it is generally argued that reporting is influenced by the prior period measures of economic performance and stakeholder power (Roberts, 1992). Based on the nature of the sustainability reports unconsolidated data for the year 2009 are used to explain the adoption of assurance and TPC in the SR of 2010. Data are collected from the Nikkei NEEDS-Financial QUEST.

5.2. Model specification and measurement of variables

The study first develops following logit model based on the categories of the dependent variables.

$$Y^* = \beta_0 + \beta_1\text{DER} + \beta_2\text{IOW} + \beta_3\text{FIOW} + \beta_4\text{ FOW} + \beta_5\text{FCON} + \beta_6\text{SIZE} + \beta_7\text{IND} + \beta_8\text{PRO} + \varepsilon$$

where Y* is the degree of company’s concern about the quality and credibility of its reporting.

$$\text{Y} = \begin{cases} 1 \; if \; Y^* > 0 \\ 0 \; if \; Y^* \leq 0 \end{cases}$$

where Y is SRBAC, SRA, SRTPC or SRWAC.

As a second level of analysis, and to explore the data further, a simple ordered regression is also run. In this case, instead of the dependent variable being binary in nature such as adoption of assurance or adoption of TPC, the levels of the dependent variable are ordered or ranked. We develop following ordered logit model based on the degree of company's concern about the quality and credibility of its reporting.

$$Y^* = \beta_0 + \beta_1 \text{DER} + \beta_2 \text{IOW} + \beta_3 \text{FIOW} + \beta_4 \text{ FOW} + \beta_5 \text{FCON} + \beta_6 \text{SIZE} + \beta_7 \text{IND} + \beta_8 \text{PRO} + \varepsilon$$

where Y* is the degree of company's concern about the quality and credibility of its reporting.

$$\text{Y} = \begin{cases} \text{4 (publishing SR with both assurance)} & if \; \alpha_3 < Y^* \leq \infty \\ \text{3 (publishing SR with assurance)} & if \; \alpha_2 < Y^* \leq \alpha_3 \\ \text{2 (publishing SR with TPC)} & if \; \alpha_1 < Y^* \leq \alpha_2 \\ \text{1 (publishing SR without assurance and TPC)} & if \; \alpha_0 < Y^* \leq \alpha_1 \\ \text{0 (not publishing SR)} & if \; -\infty < Y^* \leq \alpha_0 \end{cases}$$

The explanation of the variables is given in table 2.

Table 2: Measurement of variables

SRBAC= SR with both assurance and TPC	A binary dependent variable taking a value of 1 if a firm adopts both assurance and TPC in SR, 0 otherwise.
SRA = SR with assurance	A binary dependent variable taking a value of 1 if a firm adopts assurance in SR, 0 otherwise.
SRC= SR with third party comment	A binary dependent variable taking a value of 1 if a firm adopts TPC in SR, 0 otherwise.
SRWAC= SR without assurance and TPC	A binary dependent variable taking a value of 1 if a firm has SR without assurance and TPC, 0 otherwise.
SR= Publication of SR with assurance and/or TPC	Companies that publish SR with both assurance and TPC= 4, Companies that publish SR with assurance= 3, Companies that publish SR with TPC= 2, Companies publish SR without assurance and TPC= 1, and Companies that don't have SR= 0
DER= Debt to Equity Ratio	The ratio of firm's total debt to equity.
IOW= Instable Owners	Free float weight (A weight of listed stocks deemed to be available for trading in the market).
FIOW= Financial Institution Ownership	Number of stocks held by financial institutions divided by total number of stocks outstanding.
FOW= Foreign Ownership	Number of stocks held by foreign corporations divided by total number of stocks outstanding.
FCON= Final Consumers	Natural logarithm of advertising cost ratio (Advertising expenditure divided by total sales).
SIZE= Corporate Size	The natural logarithm of firm's total sales revenue.
IND= Industry Classification	Dummy variable: Manufacturing[6] industry 1 and 0 otherwise.
PRO= Profitability	ROA (The ratio of net income before income tax to total assets).
β	Regression Coefficient
$\boldsymbol{\varepsilon}$	Error term

[6] According to Nikkei Industry classification Manufacturing industry includes Mining, Foods, Textiles & Apparel, Pulp & Paper, Chemicals, Pharmaceutical, Oil and Coal, Rubber Products, Glass & Ceramics, Steel Products, Nonferrous Metals, Machinery, Shipbuilding, Automotive, Precision Instruments, Electric Machinery, and Other Manufacturing.

6. Results and Analysis

6.1. Descriptive Statistics and Correlation Matrix

The descriptive statistics and the correlation matrix of the variables are shown in table 3 and table 4 respectively.

Table 3: Descriptive statistics

	Total sample n= 456		SRBAC n=22		SRA n=30		SRC n=128		SRWAC n=147		Without SR n=126	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
SRBAC	0.049	0.215										
SRA	0.067	0.248										
SRC	0.286	0.450										
SRWAC	0.329	0.468										
DER	0.614	0.982	0.889	0.911	0.523	0.526	0.768	1.359	0.541	0.783	0.517	0.795
IOW	15.271	10.291	16.941	9.227	15.623	7.934	14.209	8.645	15.775	11.299	15.368	11.322
FIOW	0.336	0.125	0.428	0.082	0.395	0.084	0.374	0.122	0.345	0.121	0.257	0.107
FOW	0.213	0.119	0.211	0.078	0.258	0.094	0.229	0.112	0.202	0.109	0.200	0.145
FCON	-4.999	1.266	-5.167	1.124	-4.900	1.289	-4.904	1.336	-5.227	1.093	-4.825	1.373
SIZE	5.291	0.684	5.800	0.545	5.634	0.671	5.522	0.702	5.284	0.525	4.893	0.651
IND	0.621	0.486	0.727	0.456	0.800	0.407	0.680	0.468	0.741	0.439	0.373	0.486
PRO	6.175	11.152	3.143	5.302	4.366	5.890	5.276	9.496	4.340	6.849	10.192	16.346

The descriptive statistics show that approximately 72% of the sample companies have published SR in 2010 which is consistent with extant survey that shows that in term of number of reporting Japan is the leading country in the world (KPMG, 2011). Among those, only 6.7% have assured SR. 28.6% of the companies adopt TPC in SR. Another 4.9% of the sample has both assurance and TPC in their SR. These confirm the low rate of adoption of assurance and relatively high prevalence of TPC in Japan (KPMG, 2008). KPMG (2011) finds that adoption of assurance was 23% in 2011. The low adoption rate in the current sample as compared to KPMG (2011, 2008) may be due to the increased sample size. While KPMG's studies were based on the top 100 companies (by revenues), the present study focuses on the top 500 companies listed in the Tokyo Stock Exchange based on the liquidity of the stocks. Compare to Europe, Japan is far behind in this emerging practice as France, Spain, Italy and UK- top four countries have 73%, 70%, 61%, and 55% of the CSR reports assured in 2008. While the international comparative study can give valuable insights with respect to the differences among the countries; however, this is not the case in the present study as the study deals only with the Japanese practice.

Table 4: Correlation matrix of independent variables

	DER	IOW	FIOW	FOROW	FCON	SIZE	IND	PRO
DER	1.000							
IOW	0.241***	1.000						
FIOW	0.104**	0.053	1.000					
FOROW	-0.140***	-0.465***	0.009	1.000				
FCON	-0.034	-0.085*	-0.012	0.031	1.000			
SIZE	0.158***	-0.064	0.129***	0.149***	-0.364***	1.000		
IND	-0.238***	0.060	0.221***	0.000	0.047	-0.006	1.000	
PRO	-0.192***	-0.175***	-0.205***	0.251***	0.105**	-0.103**	-0.162***	1.000

Note: * shows the significance at 5% level.

Table 4 shows the correlation matrix of the independent variables. The correlations among the variables are relatively low with the highest bivariate correlation is 0.465 between free float weight and foreign ownership. So, multicollinearity is not a problem to estimate the regression model as bivariate correlation of above 0.80 may indicate potentially harmful levels of multicollinearity (Roberts, 1992).

6.2 Regression Result and Analysis

The results of the four individual logit models and ordered logit model are summarized in table 5.

Table 5: Regression results

	Model 1: SRBAC			Model 2: SRA			Model 3: SRC			Model 4: SRWAC			Ordered logit model		
	Coef.	Std. Err.	z	Coef.	Std. Err.	z	Coef.	Std. Err.	z	Coef.	Std. Err.	z	Coef.	Std. Err.	z
DER	0.048	0.210	0.230	-0.349	0.376	-0.930	0.194	0.143	1.360	-0.086	0.140	-0.610	0.063	0.096	0.660
IOW	0.025	0.030	0.840	0.043	0.026	1.610	-0.015	0.013	-1.090	-0.003	0.012	-0.280	0.005	0.010	0.510
FIOW	7.635	2.595	2.94***	4.679	2.037	2.3**	2.797	0.960	2.91***	0.399	0.891	0.450	5.672	0.815	6.96***
FOROW	-1.110	3.058	-0.360	4.583	2.091	2.19**	0.594	1.105	0.540	-0.815	1.068	-0.760	1.710	0.902	1.89*
FCON	0.099	0.210	0.470	0.208	0.179	1.160	0.241	0.098	2.45**	-0.280	0.092	-3.04***	0.195	0.077	2.51**
SIZE	1.511	0.465	3.25***	0.924	0.358	2.58***	0.782	0.197	3.98***	-0.175	0.176	-1.000	1.365	0.163	8.35***
IND	0.555	0.600	0.920	0.475	0.549	0.860	0.310	0.265	1.170	0.712	0.251	2.84***	0.878	0.211	4.16***
PRO	-0.020	0.043	-0.470	-0.018	0.026	-0.710	-0.002	0.012	-0.160	-0.027	0.015	-1.82*	-0.021	0.011	1.91*
_cons	-14.334	3.089	-4.640	-10.154	2.293	-4.430	-5.117	1.084	-4.720	-1.427	0.953	-1.500			
Number of obs		447			447			447			447			447	
Pseudo R2		0.167			0.119			0.083			0.050			0.1534	
Prob> chi2		0.000			0.001			0.000			0.000			0	
Log likelihood		-73.070			-96.963			-245.372			-266.810			-532.657	

Notes: ***, ** and * show the significance at 1%, 5% and 10% level respectively.

Model 1 shows the influence of the independent variables on the companies' decision to adopt both assurance and TPC in SR. With respect to our variable of interest only ownership by financial institutions are seen to be significantly related at 1% showing the preference of financial institutions in SR with both assurance and TPC. Firm size represented by sales revenues is also found to be positively significant at 1%. It implies that larger companies also have incentive to have more credible SR that can be ensured through adoption of assurance and TPC.

In case of publication of SR with only assurance which is measured in Model 2, both ownership by financial institutions and foreign stockholders are found to have significant influence. Both are positively related with assurance adoption decision at 5% significance level showing their demand for assured non-financial information. Corporate size is also having positive co-efficient at 1% significant level showing the demand of the large corporations to have assured SR.

Model 3 shows the determinants for adoption of TPC in SR. Consistent with first two models financial institutions and company size is found to be significant at 1% level. Additionally, final consumers represented by advertising expense ratio are also found to be important in corporate decision to issue SR with TPC, which is seen as insignificant in the earlier two models. It implies that consumer oriented industries are more inclined to have SR with TPC.

Model 4 depicts that influence of independent variables on the publication of SR without assurance and TPC. Final consumers are seen to be negatively related which is significant at 1%. It implies the preference of the consumers for credible SR through adopting assurance and/or TPC. Manufacturing industry is also seen to be positively related at 1% level showing the influence of environmental sensitive industries even in publication of SR without assurance and TPC. Financial performance also has negative co-efficient which is significant at 10% indicating the motivation of less profitable companies to publish SR.

Finally the result of the ordered logit model shows that among the stockholders financial institutions and foreign owners are positively related at 1% and 10% significance level. Consumers are also found to be positively related at 5% significant level. These imply the influence of financial institutions, foreign owners and consumers on the publication of SR with high quality and credibility.

Historically investment community has been the focused of any assurance or related auditing services (Zadek et al., 2006). While none of the existing studies on assurance in SR investigates the influence of stockholders on such practice, studies in SR provide mixed results about the influence of reporting in investment decision. However, recent studies have shown the increasing demand for non-financial information by the investors, especially by socially responsible investors (Holder-Webb et al., 2009; Solomon and Solomon, 2006). Our study here also shows the preference of the financial institutions as owners for credible SR. Although the role of the financial institutions in the traditional corporate governance systems in Japan has decreased (Tanimoto and Suzuki, 2005), still they have the large shareholdings of 29.7% of the total market value of shares in the Tokyo Stock Exchange (TSE) in 2010 (TSE, 2010). And it is seen that these stockholders are in focus in adopting assurance and/or TPC in SR.

The significance of the foreign shareholding corroborates the earlier studies on SR of Tanimoto and Suzuki (2005); Hackston and Milne (1996); Haniffa and Cooke (2005) and confirms the influence of globalization of ownership on the SR practices. Foreign investors in Japan are mainly institutional investors from the US and the EU. Kawamura (2003) also explains that one of the important reasons for current CSR practice in Japan is the increased attention of Japanese firms from the eco-fund managers in the USA and Europe. Historically the demand for audit and related assurance services are high in western society (Humphrey and Owen, 2000). As 26% of the total market value of shares in TSE is owned by foreigners, it is not surprising that corporation will consider their preferences in the decision making (TSE, 2010).

Consumers are also considered as important stakeholder in adopting assurance and/or TPC in SR. This confirms the recent survey study, where management ranks consumers as important group for such third party services in SR. This is also in line with the earlier studies on environmental reporting in Japan (Park, 1999; Kokubu et al. 2002; and Higashida et al. 2005). Consumers are in focus as these third party value added services, like SR itself are largely used to create business opportunities through building favorable impression among the relevant groups including consumers (Owen, et al., 2000; Deegan, 2002; Jones and Solomon, 2010). Survey result also shows that companies are increasingly focusing on the general consumers as a potential target group for SR to show their commitment to sustainability activities, which ultimately will increase their reputation and market share (Globescan, 2004).

Sales revenue and industry category are also found to be significant at 1% level implying the motivation of larger firms and manufacturing industry to have credible SR. The influence of the size and industry affiliation is consistent with the study of Simnett et al., (2009), where they find that larger firms and environmental sensitive industries such as mining and utilities were more likely to adopt assurance in SR. From the legitimacy theory point of view, size and industry affiliation are considered as the important proxies for the public pressure variables. So, assurance and/or TPC that will enhance the credibility of SR can be seen as a way to manage the public pressures that may arise due to the concerns of general public or as regulatory burden or political pressure (Patten, 1991).

Financial performance of the companies measured by ROA has negative co-efficient at 10% significant level. It implies that companies with relatively poor financial performance are more inclined to issue SR with assurance and/or TPC. Conclusion with respect to profitability should be made carefully as the relationship between profitability and SR in general is inconclusive (Magness, 2006). Consistent with

Neu et al., (1998) it can be argued that by adopting costly exercise such as assurance, less profitable firms are showing their strong commitment towards SR or to distract the attention from the financial performance. In contrast, managers from less profitable firms may perceive assurance is more important because they have the more incentive to show their commitment to the SR as a way to deflect attention from poor financial performance (Neu et al., 1998).

7. Conclusion

This paper empirically tests the influence of a number of stockholders and consumers on the corporate decision to publish SR with assurance and/or TPC based on the sample of Nikkei 500 companies in the year 2010. Both individual and ordered logit models reveal that ownership by financial institutions has significant influence on the corporate decision to use these third party services in SR. Foreign investors also have preference for credible SR. Consumers are seen to be powerful in adoption of TPC as well as when considering adoption of assurance and/or TPC in an order, however, is found to be insignificant in assurance adoption decision. In addition, the demand of the larger companies and environmental sensitive companies to have credible SR is also confirmed. Given the scarcity of literature in sustainability assurance, we believe that this exploratory study will contribute to the corporate level determinants of assurance and TPC in SR.

This paper has a number of limitations. The sample of the study consists of Nikkei 500 companies. Thereby, the focus is only on the most actively traded listed companies in the Tokyo Stock Exchange. Moreover, this is a cross sectional study based on the year 2010. So, generalization of the findings should be made with caution. Finally, we believe that future research can focus on the following issues in order to extent or update the present study:

While the study compares the determinants for adoption of assurance and/or TPC, it doesn't distinguish between adoptions of different types of assurance providers. However, it was seen that similar to international practice distinct groups are active in providing the assurance service in Japan such as accounting firms, certification firms and NGOs/NPOs/consultancy firms (Haider, 2012). Future studies can examine the role of stakeholders on the adoption of alternative assurance providers.

Future research should also focus on the quality of the assurance and TPC practices and their role to ensure accountability and enhance credibility to stakeholders. In this study based on some criteria and extant literature we hypothesized that firms with assurance and/or TPC have more credible SR. However, the actual quality of such third party services is still unknown in the Japanese context. A number of studies in this vein are already available (O'Dwyer and Owen, 2005; Deegan et al., 2006; Ball et al., 2000) with the evaluative framework developed from the international guidelines or standards of assurance practice. Evaluating the quality of such statements from Japanese context or comparing them with the European context will be a value added job.

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