

Audit quality and decision making in small companies

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Abstract

Purpose – This paper aims to focus on economic consequences of audit outcomes by investigating the concept of audit quality operationalised as seven components of audit benefits to owner-managers of small companies.

Design/methodology/approach – The authors analyse survey data collected in 2013 from 642 small private companies above the audit exemption threshold in Finland.

Findings – No significant association was found between engagement of a Big 4 auditor (proxy for audit quality) and any of the audit benefits tested. However, the results provide consistent evidence of a positive relationship between the owner-manager’s perception of the competence and reliability of the external accountant and the perceived benefits of audit. It was also found that companies which do not incorporate e-processes in the accounting system are more likely to value the internal control benefits provided by audit.

Research limitations/implications – Small business surveys suffer from poor response rates. To some extent, the authors overcame this problem by using two focused sampling frames and reminders. Care must be taken when generalising the results, as the definition of “small” varies across jurisdictions.

Originality/value – By focusing on small private companies, the research contributes to the audit quality literature. Contrary to studies of listed companies, the authors conclude that use of a Big 4 auditor is not a sufficient surrogate for audit quality in small companies. The authors go beyond aggregate measures of audit quality used in previous studies and identify specific audit benefits.

Keywords

Finland, Audit quality, Audit benefits, Big 4 auditors, e-processes, External accountant, Small private companies

1. Introduction

Audit quality is a complex concept and there is no single agreed definition (Financial Reporting Council, 2006). Francis (2011) provides a useful framework for studying factors associated with engagement level audit quality. He argues that there are gradations of audit quality across a continuum from low- to high-quality audits, and audit quality is affected by each of the units of analysis in his framework. This paper addresses the gap in the literature by focusing on one of those units of analysis: the economic consequences of audit outcomes. More specifically, it examines how audit outcomes affect clients and users of the audited accounting information of small companies.

Francis (2011) provides an extensive discussion of the literature, including the evidence relating to engagement of a Big 4 auditor and high audit quality. However, a study by Louis (2005) finds that high audit quality is also associated with non-Big 4 auditors. Another problem is that the most previous studies focus on large listed companies and audit quality has not been examined in small private companies. This is surprising, given the importance of small firms in the global economy,^[1] but is probably due to the fact that data relating to listed companies are more readily available.

The objective of financial reporting is that the information should be useful to users for making economic decisions (IASB, 2010) and the main users are investors, lenders and creditors. Unlike listed companies where investors are the primary user group, small private companies tend to be owner-managed. Agency theory (Jensen and Meckling, 1976) suggests that audited financial reports play an important role in supporting relationships with principals who are distant from the actions of management and cannot verify the information. In small companies, those principals include external shareholders, lenders and suppliers (Power, 1997). Previous studies suggest that the use of a Big 4 auditor is associated with proxies for higher earnings quality (Francis, 2011). However, this does not provide a direct link to audit benefits and we address this gap in the literature in our study.

The role of financial reporting differs between public and private companies. While the financial reports of public companies serve the needs of financial markets and the information is used to aid investment decisions, in private companies the main decisions relate to taxation and dividend distribution (Ball and Shivakumar 2005). In addition, small,

private companies typically outsource the accounting function (Kirby and King, 1997; Wood et al., 2002; Berry et al., 2006; Everaert et al., 2007). Previous studies suggest that the use of an external accountant to provide accountancy services may lead to the loss of financial information for management (Everaert et al., 2007) and increase the demand for audit (Niemi et al., 2012). Therefore, we extend the literature by investigating the relationship between the four structures: the benefits of audit, Big 4 as a proxy for audit quality, services of a competent and reliable external accountant, and the existence of e-processes in the business.

Finland provides an interesting setting for exploring the relationship between audit quality and the outsourcing of the accounting function because there is a strict separation of auditors and accountants in the Finnish accountancy profession (Niemi et al., 2012). Those working as external accountants do not perform audits. Moreover, the Association of Finnish Accounting Firms monitors and attempts to enhance the quality of its members.

The concept of an independent, external audit of financial statements is fairly similar across countries. In Finland, the Auditing Act (936/1994 and 459/2007) requires all limited liability entities to have a statutory financial statement audit unless they qualify for exemption. To a great extent, good auditing practice is based on International Standards on Auditing (ISAs) and the Code of Ethics for Professional Accountants provided by the International Federation of Accountants (Niemi, 2004; Niemi and Sundgren, 2008). The EU Accounting Directive (Council Directive 2013/34/EU)¹ allows Member States to grant exemption from the statutory audit to qualifying small companies. Finland has taken a cautious approach and has set the thresholds for audit exemption lower than the EU maxima. The Auditing Act (2007/459) permits a qualifying small company to forgo audit if it meets the following three annual size tests in two consecutive years:

- Book value of assets not exceeding €100,000
- Turnover not exceeding €200,000
- Average number of employees not exceeding 3.

In this study we analyse survey data from a sample of 642 small private companies in Finland which were above the audit exemption thresholds. We find no significant association between

¹ This replaced the 4th and 7th Accounting Directives in 2013.

engagement of a Big 4 auditor (proxy for audit quality) and any of the audit benefits tested. However, our results provide consistent evidence of a positive relationship between the owner-manager's perception of the competence and reliability of the external accountant and the perceived benefits of audit. We also find that companies which do not incorporate e-processes in the accounting system are more likely to value the internal control benefits provided by audit.

The remainder of the paper is organised as follows: In section 2 we review the literature and develop our hypotheses, while in section 3 we describe our methodology. We present and discuss our results in section 4 and in the final section we draw conclusions, discuss the contribution of the study and the practical implications.

2. Literature review

Agency theory (Jensen and Meckling, 1976) suggests that an independent audit plays an important role in mitigating the problem of information asymmetry that exists when investors (the principals in the agency relationship) are distant from the actions of management (the agents) and cannot verify the information. However, most studies that examine the interaction between auditor choice and agency costs focus on large listed companies.

Ball and Shivakumar (2005) argue that the market for financial reporting differs substantially between public and private companies. In public companies, general purpose financial statements are intended to meet the needs of existing and potential investors, lenders and other creditors (IASB, 2010). On the other hand, private companies are more likely to resolve the problem of information asymmetry through an insider access model and they are less likely to use the published financial statements in primary and secondary equity transactions or when contracting with lenders and creditors. Therefore, financial reporting in private companies is likely to be influenced by the requirements of the taxation authorities, dividend and other policies. For these reasons, it is not appropriate to extend the results of studies of listed companies to private companies.

Rather than using external equity to finance the business, small private companies tend to use internal sources of finance, trade credit and bank finance (Berger and Udell, 2006). Hence, the principals in the agency relationship in small companies are typically creditors and

lenders (Power, 1997) and audit provides a bonding and monitoring mechanism that reduces agency conflict by assuring stakeholders that their interests are protected (Niskanen et al., 2011). The majority of small private companies are owner-managed (Collis, 2012) and therefore the statutory financial reports do not have significant relevance for reviewing the company's performance as owner-managers have direct access to the company's accounts (European Commission, 2009). Eilifsen et al. (2001) suggest that management establishes and maintains both internal and external control mechanisms to provide assurance regarding the integrity of financial information for themselves as well as external parties. Collis et al. (2004) and Niemi et al. (2012) provide empirical evidence of this and find that a considerable proportion of the owner-managers of small private companies opt for voluntary audit because it provides a beneficial check on the internal books and records.

According to Louis (2005), the main reason why a small company might choose one of the Big 4 firms to audit the accounts is that larger audit firms are usually assumed to offer superior services. However, small businesses are often irritated by the poor service they receive from the large audit firms, and believe that the Big 4 firms tend to neglect their small clients in favour of more lucrative business with larger clients. A study by Chang et al. (2010) shows that after intended improvements in financial reporting quality and audit quality caused by SOX 404 and PCAOB inspections in recent years, the market does not perceive an audit quality drop when companies switched from a "low-quality" Big 4 auditor to a small auditor. This suggests that the market is recognising that small auditors do not necessarily deliver inferior audit quality, but may even be able to improve audit quality, by providing specialist and more personal attention than the Big 4 predecessor (Chang et al. 2010).

Regardless of the size of the business, managers value the integrity of financial information, because accurate financial information helps them make better decisions (Jensen and Payne, 2003). Managers establish and maintain control systems which include both internal and external mechanisms. Control systems can reduce the costs associated with poor decisions, such as poor performance evaluations and investment decisions (Jensen and Payne, 2003). Previous studies suggest that the demand for audit increases when information asymmetries and agency problems are higher, but the majority of the extant audit quality literature focuses on large, listed firms. Niemi et al. (2012) identify three notable reasons why the demand for audit may differ in small private firms compared with large listed companies. These differences relate to differences in the ownership and governance structures, differences in

internal control quality, and the outsourcing of critical accounting functions by small private companies due to the lack of internal resources.

Lennox (2005) argues that the monitoring value of auditing may be lower for public companies because these firms are subject to monitoring by a stock market. As already mentioned, Francis (2011) provides an extensive discussion of the audit quality literature, including the evidence on a positive association between use of a Big 4 auditor and high audit quality. However, there is contradictory evidence from studies such as Louis (2005), which suggests that non-Big 4 auditors have a comparative advantage over the Big 4 firms in assisting their clients in merger transactions. He argues that this is because non-Big 4 auditors have better local knowledge and provide more personalized services and advice than Big 4 firms. Moreover, Big 4 firms may neglect small clients by shifting them frequently from one member of staff to another. Therefore, acquirers audited by non-Big 4 firms tend to outperform those audited by the Big 4 at merger announcements.

This discussion of the literature leads to our first hypothesis:

H1: There is a positive association between the engagement of a Big 4 auditor and perceived audit benefits in small private companies.

Previous studies have consistently shown that external accountants are one of the main sources of advice for small businesses (for example, Robson and Bennett, 2000; Collis and Jarvis, 2002; Jay and Schapper, 2003; Berry et al., 2006, Blackburn and Jarvis, 2010). Accounting services are the most typical external services that SMEs use (Kirby and King, 1997; Berry et al., 2006). Typically, the external accountant provides compliance and monitoring services to meet regulations related to taxation and audit (Parker, 2001; Collis, 2008) and these services focus on the preparation or interpretation of financial statements (Blackburn and Jarvis, 2010). Many small firms outsource the accounting function to an external accountant because they do not have the necessary in-house specialist(s) (Gooderham et al., 2004; Everaert et al., 2007; Collis, 2008; Jarvis and Rigby, 2012). Barrar et al. (2002) find that outsourcing provides an efficient solution in accounting when it comes to very small firms. Collis and Jarvis (2002) examine the management of financial information in small companies in UK, and find that the bank and the external accountant are the two main external sources of information, whereas larger firms usually generate their own

accounting information management. Everaert et al. (2007) investigate outsourcing of accounting services in Belgian SMEs and find that companies adopt both total and selective outsourcing, but that loss of information may be a reason not to outsource.

Gooderham et al. (2004), examine accountants as a source of business advice in small Norwegian firms. They find that the quality of the relationship with the external accountant is a more important factor than the longevity of the relationship. In addition, the competency of the accountant's services affects the willingness to purchase advisory services. The use of an external accountant can be seen as outsourcing or subcontracting for accounting services. Niemi et al. (2012) examine owner-managers' willingness to engage in voluntary audits in small Finnish firms. They find that firms using an external accountant are more likely to opt for voluntary audit. They suggest that this is because outsourcing the accounting function creates information asymmetry between the owner-manager and the external accountant. In addition, they contend that audit offers additional assurance to complement the services provided by the external accountant. We would argue that an additional dimension of the outsourcing relationship is the trust the owner-manager has in the services provided by the external accountant. Where there is little or no trust, we contend that the benefit of having an audit increases because the demand for additional assurance increases. This leads to our second hypothesis:

H2: There is a positive relationship between the perceived competence and reliability of the external accountant's services and perceived audit benefits in small private companies.

Managers establish internal control systems such as budgeting and internal audit controls, or external controls such as an independent audit, to reduce agency problems. Arguably the more e-processes there are in place (for example, e-procurement and e-invoicing), the better the foundation for internal control systems.

According to Jensen and Payne (2003) internal and external control systems can be seen as substitutes and they provide evidence that organizations with low levels of accounting expertise are more likely to hire high quality auditors. Other studies (Abdel-Khalik, 1993; Carey et al., 2000) suggest that the internal control systems in small private companies are less formal and less well developed than in larger and/or listed companies, and auditing is a

means of overcoming these weaknesses. Niemi et al. (2012) suggest that the lack of internal control mechanisms helps explain why small companies choose to have a voluntary audit.

A fairly recent innovation in internal control systems is the development of electronic invoicing (e-invoicing). The European Commission (2010) defines e-invoicing as the electronic transfer of billing and payment information via the Internet or other electronic means between trading parties involved in commercial transactions. E-invoicing links the internal processes of business to the payment system (European Commission, 2013). Basware (2012) summarises the main benefits as reduced processing costs and a reduction in invoice errors. Providing invoice data electronically and in a format offers a number of other potential advantages, including shorter payment delays, fewer errors and lower printing and postage costs. In addition, structured e-invoices facilitate business process integration from purchase to payment, meaning that invoices could be sent, received and processed without manual intervention (European Commission, 2013).

We argue that companies which have adopted e-invoicing have well developed internal control mechanisms. Therefore, such companies benefit less from the assurance of a high quality audit. This leads to our third hypothesis:

H3: There is a negative association between the existence of e-processes and perceived audit benefits in small private companies.

3. Methodology

The study is based on survey data collected in 2013 from small private companies above the audit exemption threshold in Finland. Companies in all industries were included, apart from those operating in the financial services sector. Table 1 describes sample development.

Insert Table 1 here

The questionnaire was distributed using the logos of Aalto University School of Business and OP-Pohjola Bank to a random sample of 6,800 of the bank's small company customers whose revenue in the previous year's financial statements did not exceed €10m. The same questionnaire was also distributed under the logos of Aalto University School of Business

and Confederation of Finnish Industries to 3,000 of the Confederation's members whose revenue in the previous year's financial statements was between €10m and €250m. In both cases, reminders were sent to non-respondents in order to improve the response rate. A total of 850 responses were obtained, of which 208 were out of scope, which gave a final sample of 642 companies.

We test three hypotheses. First, we operationalize H1 by focusing on the relationship between the engagement of a Big 4 auditor and the perceived audit benefits to the small company. To that end, we construct the following logistic regression model (1):

$$Prob(PERCEIVED\ AUDIT\ BENEFITS_i) = \frac{1}{1+e^{-z}} \quad (1)$$

$$\begin{aligned} \text{where } Z = & \alpha_0 + \alpha_1 BIG4_i + \alpha_2 RELIABILITY_i + \alpha_3 EPROCESSES_i + \alpha_4 EDUCATION_i \\ & + \alpha_5 REVENUE_i + \alpha_6 EMPLOYEES_i + \alpha_7 INVOICES_i \\ & + \alpha_8 MANUFACTURING_i + \alpha_9 NOEXTACCNT_i + \varepsilon_i \end{aligned}$$

Table 2 describes the variables in the analysis. The outcome variable of the audit benefits model (equation 1) *PERCEIVED AUDIT BENEFITS* comprises of seven predictor variables that capture the owner-manager's views on the specific benefits of having the accounts audited: internal decision making benefits (*DECISIONMAKING*), the overall benefits from the auditor's services and advice (*TOTALBENEFITS*), the benefit of assurance for users of the financial information (*ASSURANCE*), the provision of internal control benefits (*INTCONTROL*), benefits from information on changes in legislation or financial reporting advice (*REGADVICE*), benefits from tax advice (*TAXADVICE*), and benefits from technical accounting advice (*TECHADVICE*). These variables are coded 1 if the benefit is rated highly and 0 otherwise.

The variables *BIG4*, *RELIABILITY* and *EPROCESSES* are the independent variables of prime interest. *BIG4* is a binary variable that is coded 1 if company has been audited by one of the Big 4 firms and 0 otherwise. It is used in the examination of H1, where a positive association between the engagement of a Big 4 auditor and perceived audit benefits are posited.

RELIABILITY captures the owner-manager's perception of competence and reliability of the external accountant's services and is measured using a 5-point Likert scale where 5 is extremely reliable and 1 is not reliable. It is used in the examination of H2, which proposes a positive association between the perception of competence and reliability of the external accountant's services and perceived high audit quality.

EPROCESSES measures e-invoices as a percentage of total invoices submitted in 2011. It is used in the testing of H3, which proposes a positive association between the lack of e-processes and perceived high audit quality.

EDUCATION, *REVENUE*, *EMPLOYEES*, *INVOICES*, *MANUFACTURING* and *NOEXTACCNT* are used as control variables.

EDUCATION measures whether the respondent has knowledge and experience in financial management. *EDUCATION* is an ordinal variable where the value 5 represents the highest level of education and 1 represents the lowest level.

REVENUE is an ordinal variable that captures the company's total revenue for 2011, where 1 = less than €2m; 2 = €2m to < €10m; 3 = €10m to < €50m; and 4 = more than €50m.

EMPLOYEES is an ordinal variable that describes the number of employees, where 1 = fewer than 5; 2 = 6 to 10; 3 = 11 to 20; 4 = 21 to 30; 5 = 31 to 40; 6 = 41 to 50; 7 = 51 to 100; 8 = 101 to 250; and 9 = more than 250).

INVOICES is an ordinal variable that describes the total number of sales invoices submitted in 2011, where 1 = fewer than 15; 2 = 15 to 100; 3 = 101 to 500; 4 = 501 to 1000; 5 = 1001 to 2000; 6 = 2001 to 5000; and 7 = more than 5000.

MANUFACTURING is a dummy variable that is coded 1 if the company operates in the manufacturing sector and 0 otherwise.

NOEXTACCNT is another dummy variable. It is coded 1 if the company does not obtain accountancy services from an external accountant and 0 otherwise.

Insert Table 2 here

4. Results

Descriptive statistics

In Table 3 we present descriptive statistics for the companies that engage a Big 4 auditor separately from those that use a non-Big 4 auditor. The results of the *t*-tests and the non-parametric Mann-Whitney-Wilcoxon U-test² comparing these two groups are also provided. The results show that in companies that engage a Big 4 auditor, the owner-manager's perceptions of total audit benefits and specific benefits from assurance, tax advice, accounting technical advice are higher than when a non-Big 4 auditor is used. In addition, when the company uses a Big 4 auditor, the owner-manager is likely to consider that the information produced in the mandatory financial reporting process improves the company's decision making. The owner-manager is more likely to have knowledge and experience of financial management and less likely to consider that the external accountant's services are competent and reliable. The company is less likely to have outsourced accounting functions to an external accountant and tends to be larger in terms of revenue, employees and the number of submitted sales invoices, and to have a higher proportion of electronic invoices compared to traditional invoices. Finally, it is less likely that the company operates in the manufacturing sector.

(Insert Table 3 here)

In companies that use a non-Big 4 auditor, the owner-manager is likely to consider that the information produced in the mandatory financial reporting process improves the company's decision making and he or she is likely to consider that the external accountant's services are competent and reliable. It is more likely that these companies operate in the manufacturing sector.

Correlations

In Table 4 we present a correlation matrix which reports the Spearman's correlations above the diagonal and the Pearson correlations below the diagonal. It shows that the variables *DECISIONMAKING* and *BIG4* are negatively correlated. Engaging a Big 4 auditor is negatively correlated with the owner-manager's perception that the information produced in

the mandatory financial reporting process improves the company's decision-making (*DECISIONMAKING*), and his or her view that external accountant's services are competent and reliable (*RELIABLE*). There is also negative correlation with the company operating in manufacturing industry (*MANUFACTURING*). *RELIABLE* correlates negatively with the company engaging a Big 4 auditor, with all the size measures (*REVENUE*, *EMPLOYEES*, *INVOICES*), and with the company not using an external accountant (*NOEXTACCNT*). *DECISIONMAKING* correlates positively with perceived benefits from auditor's role in internal control and auditor's tax advice.

There is a positive correlation between companies that engage a Big 4 auditor and the owner-manager's perceptions of benefits associated with having the accounts audited (*TOTALBENEFITS*, *ASSURANCE*, *TAXADVICE*, and *TECHADVICE*), and company size (*REVENUE*, *EMPLOYEES*, and *INVOICES*), the proportion of electronic invoices (*EPROCESSES*) and not using an external accountant (*NOEXTACCNT*). Table 4 shows positive correlation between the perception that the external accountant's services are competent and reliable (*RELIABLE*) correlates positively with the perception that the information produced in the mandatory financial reporting process improves the company's decision-making (*DECISIONMAKING*). *EPROCESSES* correlates positively with BIG 4 audits, and with all size measures (*REVENUE*, *EMPLOYEES* and *INVOICES*). *DECISIONMAKING* correlates negatively with using a Big 4 auditor, two of the size measures (*REVENUE* and *EMPLOYEES*), and with the company not using an external accountant (*NOEXTACCNT*).

A closer examination to correlation matrices shows that if firm size (*REVENUE*) is controlled for (i.e. partial correlations are computed using *REVENUE* as a covariate; not tabulated), the correlation between a Big 4 auditor and perceived benefits of audit (*TOTALBENEFITS*, *ASSURANCE*, *INTCONTROL*, *REGSADVICE*, *TAXADVICE*, *TECHADVICE*) becomes insignificant, but other correlations of main interest are not affected.

(Insert Table 4 here)

Multivariate regression results

The results of the binary logit models are shown in Table 5 where each regression model has a different outcome variable. The table shows that all seven models are highly significant ($p < 0.01$). We can also see that the values of Hosmer-Lemeshow goodness-of-fit test are low, ranging from 4.25 (when *TOTALBENEFITS* or *ASSURANCE* is the outcome variable) to 12.66 (when *INTCONTROL* is the outcome variable). This suggests that there is a good fit between the actual data and the expected frequencies. The Nagelkerke R^2 varies from 4.8% (where *TOTALBENEFITS* is the outcome variable) to 11.3% (where *ASSURANCE* is the outcome variable). Although the seven binary logit models have different outcome variables, the independent variables are equal across the models. We also provide the VIF values for diagnosing collinearity. The low VIFs reported (maximum value 2.63) suggest that multicollinearity among the predictor variables is not a problem.

Perceived audit benefits and Big 4 auditor (H1)

In H1 we propose a positive association between the engagement of a Big 4 auditor and perceived audit benefits in small private companies. In the first model, the outcome variable, *DECISIONMAKING*, is coded 1 if the company's decision making is improved by the financial reporting processes and 0 otherwise. Therefore, the sign on the coefficient indicates the direction of the impact of each predictor variable on the likelihood of that the information produced in the mandatory financial reporting process adds to the perceived audit benefits. The same interpretation of the coefficient signs in relation to *DECISIONMAKING* as an outcome variable applies to the other six outcome variables (from *TOTALBENEFITS* to *TECHADVICE*).

From the Table 5, we can see that *BIG4* is insignificant in all seven models (p -values ranging from 0.342 in *DECISIONMAKING* model to 0.874 in *TECHADVICE* model). Hence, we do not have evidence to reject the null hypothesis for H1. This is in contrast with Francis (2011), that Big 4 is a proxy for high audit benefits.

(Insert Table 5 here)

Competence and reliability of the external accountant's services (H2)

In H2, we propose a positive relationship between the perceived competence and reliability of the external accountant's services and high audit quality in small private companies. We find strong empirical evidence to reject the null hypothesis for H2 as there is a positive and significant relationship between *RELIABILITY* and the seven specific audit benefits (p-values ranging from 0.001 in *ASSURANCE* model to 0.069 in *TAXADVICE* model). This supports the findings of Gooderham et al. (2004) that the quality of the relationship with the external accountant and the competency of his or her services affect the willingness of small firms to use accountants as business advisers. Our results also support the findings of Niemi et al. (2012) who find that firms using an external accountant are more likely to opt for voluntary audit to address the problem of information asymmetry that arises between the owner-manager and the accountant when the accounting function is outsourced.

The use of e-invoicing (H3)

In H3 we posit a negative association between the existence of e-processes (*EPROCESSES*) and perceived audit quality in small private companies. We find evidence to reject the null hypothesis in relation to perceptions of high benefits from the audit of internal controls (*INTCONTROL*, $p < .05$) and the auditor providing tax advice (*TAXADVICE*, $p < .01$), but the results for the other types of audit benefits (*TOTALBENEFITS*, *ASSURANCE*, *REGSADVICE*, *TECHADVICE*) are not significant. These empirical findings suggest that when e-invoicing is not well developed, there are higher benefits arising from the auditor's role in checking internal controls and providing tax advice. This finding in mandatory auditing setting of small companies complements the study of Niemi et al. (2012) that found an association between internal control benefits and audit of small private companies in voluntary audit context.

5. Conclusions

According to Francis (2011, p. 143), the consequences of audit quality are under-researched: and "we have barely scratched the surface on the economic consequences of auditing and the effects of audit quality on economic outcomes". This paper addresses this gap in the literature by investigating the concept of audit quality operationalized as components of audit benefits

to the owner-managers of small companies. We go beyond aggregate measures of audit quality used in previous studies and focus on the following seven audit benefits:

- improved internal decision making
- overall benefits from the auditor's services
- assurance for the users of the financial information
- internal control benefits
- advice on changes in accounting regulations
- technical accounting advice
- tax advice.

We perform our empirical tests on data collected in Finland, which provides an appropriate setting for exploring the relationship between audit quality and outsourcing the accounting function to an external accountant due to the strict separation of auditors and accountants in the Finnish accountancy profession. Using survey data from 642 companies which were above the audit exemption threshold, we examine the association of the seven audit benefits to our proxy for audit quality (engagement of a Big 4 auditor); the use of qualified and reliable external accountant; and the use of e-processes. Small business surveys can be criticised because they tend to suffer from poor response rates, since owner-managers may be sceptical about the relevance of academic research or simply too busy running the business to participate (Curran and Blackburn 2001). However, we made efforts to mitigate this problem by using two highly focused sampling frames and sending reminders to non-respondents.

The most interesting finding is that there is no significant association between engagement of a Big 4 auditor (proxy for audit quality) and the owner-manager's perception of audit benefits. Contrary to the study by Francis (2011) in connection with large listed companies, we conclude that use of a Big 4 auditor is not a sufficient surrogate for audit quality in small private companies.

Previous studies suggest that many small firms use the services of an external accountant (Robson and Bennett, 2000; Collis and Jarvis, 2002; Jay and Schapper, 2003; Berry et al., 2006, Blackburn and Jarvis, 2010), who is often one of the main sources of advice (Gooderham et al., 2004; Blackburn and Jarvis, 2010; Jarvis and Rigby, 2012). Our results

provide consistent evidence of a positive relationship between the owner-manager's perception of the competence and reliability of the services provided by the external accountant and the seven perceived benefits of audit.

In addition, we examine improved internal control systems where the development of e-invoicing software permits the electronic transfer of invoicing information (both billing and payment) between supplier and customer. We find that companies that do not incorporate e-processes in the accounting system are more likely to value the scrutiny of internal controls provided by audit. Our finding in mandatory auditing setting complements the evidence of Niemi et al. (2012) who suggest that the lack of internal control mechanisms helps explain why small companies below the exemption level choose to have a voluntary audit.

These results cannot be extrapolated to all jurisdictions because the criteria for defining a small company vary across countries. Nevertheless, the study should be of interest to accountants, auditors, regulators and owner-managers, who are the four major players in the financial reporting context of small companies. Our results suggest that when a competent and reliable external accountant is used to support the accounting function and assist in the preparation of the financial statements, the overall financial reporting and auditing process seems to provide more value to the owner-manager. This is consistent with the idea that the accountant plays a key role in providing advice as well as accountancy services, since he or she develops a critical mass of knowledge about the company which supports internal decision making based on audited information. This finding is in agreement with Barrar et al. (2002) who suggest that outsourcing provides an efficient solution in accounting when it comes to very small firms.

According to the Association of Finnish Accounting Firms, (AFAF, 2014), there is an increasing reliance on external accounting services and many companies typically purchase a variety of services in addition to the daily accounting work. Accountants are now relied on for advice and support, as well as managing the end of year accounts or tax returns. This is widely recognised and the European Federation of Accountants and Auditors has called for the profession to be innovative in all its service delivery of assurance and non-assurance services (EFAA, 2014). The results of this study suggest that external accountants should be aware of the important role they play in providing business advice to small companies (Robson and Bennett, 2000; Collis and Jarvis, 2002; Jay and Schapper, 2003; Berry et al.,

2006, Blackburn and Jarvis, 2010) and the need to undertake a consultancy role, as well as helping their clients to be compliant. Big 4 auditors should try to understand why small companies do not seem to obtain benefits from their services (Louis, 2005). It may be necessary for them to consider how to better meet the specific needs of small companies. Our study suggests that small companies may be paying service fees to the Big 4 audit firms without obtaining corresponding benefits (Louis, 2005). This may relate to delegation of financial management to an external accountant and having only very little or no contact with the auditors, which results to underuse of the potentially valuable services of Big 4 auditors. The lack of evidence for a statistically significant relationship between perceived audit benefits and engaging a Big 4 auditor may indicate that such audits create a disproportionate administrative burden to small companies.

The European Commission places considerable emphasis on the need for auditor independence, as reflected in EU Auditing Directive (Council Directive 2014/56/EU). However, this study gives little cause for concern in Finland because our results show that it is the external accountant rather than the auditor who provides advice and other non-audit services to small company clients. In addition, our evidence regarding the use of e-processes suggests that the EU Transparency Direct (Council Directive 2013/50/EU), which mandates the filing of financial statements by limited liability entities in electronic format such as XBRL, may be a move to the right direction. Our results show that the internal control environment of small companies may also be affected by the extent of electronic processes.

All areas covered by the hypotheses and findings of this study seem to be under-research and hence there is scope for further research. In particular, a qualitative approach would add to our understanding of other causal relationships that relate to the structures examined in this study.

^[1] Small and medium-sized entities (SMEs) constitute 95% of businesses worldwide, with European and Chinese SMEs contributing 99.8% of the total (World Bank, 2012).

^[2] This test is appropriate for data with a skewed distribution.

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Table 1. Sample development

	<i>Number of companies</i>
Survey coverage	9 800
Responses	850
Out of scope	208
Final sample	642

Table 2. Variables used in the statistical models

<i>Variable</i>	<i>Description</i>
Dependent/outcome variable (Equation 1):	
<i>DECISIONMAKING</i>	Perception that the information in the audited financial reports improves internal decision making in small private companies (1 = strong agreement, 0 = otherwise)
<i>TOTALBENEFITS</i>	Perception of overall benefits from the auditor's services (1 = high benefits, 0 = otherwise).
<i>ASSURANCE</i>	Perception that audit provides assurance benefits to users of the financial information (1 = high benefit, 0 = otherwise)
<i>INTCONTROL</i>	Perception that audit provides internal control benefits (1 = high benefits, 0 = otherwise)
<i>REGSADVICE</i>	Perception that the auditor provides information on changes in legislation or financial reporting advice (1 = high benefit, 0 = otherwise)
<i>TAXADVICE</i>	Perception that the auditor provides tax advice (1 = high benefits, 0 = otherwise)
<i>TECHADVICE</i>	Perception that the auditor provides technical accounting advice (1 = high benefits, 0 = otherwise)
Independent/predictor variables (Equation 1):	
<i>BIG4</i>	Audited by one of the Big 4 firms (1, 0)
<i>RELIABLE</i>	Perception of competence and reliability of the external accountant's services (5-point scale where 5 = extremely reliable, 1 = not reliable)
<i>EPROCESSES</i>	E-invoices as a percentage of total invoices submitted in 2011
<i>EDUCATION</i>	Whether respondent has knowledge and experience of financial management (5-point scale where 5 = highest level, 1 = lowest level)
<i>REVENUE</i>	Total revenue for 2011 (where 1 = less than €2m; 2 = €2m to < €10m; 3 = €10m to < €50m; 4 = more than €50m)
<i>EMPLOYEES</i>	Number of employees (where 1 = fewer than 5; 2 = 6 to 10; 3 = 11 to 20; 4 = 21 to 30; 5 = 31 to 40; 6 = 41 to 50; 7 = 51 to 100; 8 = 101 to 250; 9 = more than 250)
<i>INVOICES</i>	Total number of invoices submitted in 2011 (where 1 = fewer than 15; 2 = 15 to 100; 3 = 101 to 500; 4 = 501 to 1000; 5 = 1001 to 2000; 6 = 2001 to 5000; 7 = more than 5000)
<i>MANUFACTURING</i>	Whether company operates in the manufacturing sector (1,0)
<i>NOEXTACCNT</i>	No external accounting services (1,0)

Table 3. Descriptive statistics

<i>Variables</i>	Big 4 auditor (n = 212)			Non-Big 4 auditor (n = 430)			<i>Diff. in means</i>	<i>t-test (p-value)</i>		<i>Mann-Whitney test (p-value)</i>	
	<i>Mean</i>	<i>Median</i>	<i>Std. dev.</i>	<i>Mean</i>	<i>Median</i>	<i>Std. dev.</i>					
DECISIONMAKING	0.23	0.00	0.42	0.31	0	0.46	-0.080	0.034	**	0.034	**
TOTALBENEFITS	0.65	1.00	0.48	0.53	1	0.50	0.121	0.004	***	0.004	***
ASSURANCE	0.64	1.00	0.48	0.49	0	0.50	0.148	<.001	***	<.001	***
INTCONTROL	0.30	0.00	0.46	0.24	0	0.43	0.053	0.151		0.152	
REGSADVICE	0.34	0.00	0.48	0.31	0	0.46	0.033	0.405		0.405	
TAXADVICE	0.34	0.00	0.48	0.27	0	0.44	0.077	0.044	**	0.045	**
TECHADVICE	0.50	0.00	0.50	0.35	0	0.48	0.146	<.001	***	0.000	***
RELIABLE	3.57	3.00	0.84	3.75	4	1.02	-0.183	0.016	**	0.005	***
EPROCESSES	0.33	0.19	0.36	0.20	0	0.32	0.128	<.001	***	<.001	***
EDUCATION	4.12	5.00	1.15	3.46	3	1.24	0.665	<.001	***	<.001	***
REVENUE	2.06	2.00	0.94	1.29	1	0.55	0.775	<.001	***	<.001	***
EMPLOYEES	4.66	4.00	2.65	2.34	1	1.91	2.321	<.001	***	<.001	***
INVOICES	4.61	5.00	1.69	3.44	3	1.49	1.176	<.001	***	<.001	***
MANUFACTURING	0.03	0.00	0.17	0.07	0	0.26	-0.046	0.007	***	0.020	**
NOEXTACCNT	0.55	1.00	0.50	0.29	0	0.45	0.259	<.001	***	<.001	***

Table 4. Correlation matrix (Spearman above and Pearson below the diagonal)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1.DECISIONMAKING	1	0.001	0.054	0.104	0.095	0.099	0.019	-0.095	0.144	-0.067	-0.062	-0.112	-0.125	-0.056	-0.049	-0.144
2. TOTALBENEFITS	0.001	1	0.648	0.401	0.482	0.445	0.584	0.118	0.014	0.119	0.090	0.170	0.171	0.235	-0.027	0.114
3. ASSURANCE	0.054	0.648	1	0.395	0.527	0.412	0.535	0.139	0.044	0.116	0.114	0.207	0.229	0.227	-0.062	0.083
4. INTCONTROL	0.104	0.401	0.395	1	0.463	0.430	0.436	0.074	0.033	0.016	0.054	0.130	0.164	0.209	-0.050	0.010
5. REGSADVICE	0.095	0.482	0.527	0.463	1	0.457	0.500	0.038	0.038	0.058	0.025	0.124	0.105	0.122	-0.015	0.019
6. TAXADVICE	0.099	0.445	0.412	0.430	0.457	1	0.558	0.099	0.006	-0.021	0.022	0.127	0.195	0.159	-0.065	0.016
7. TECHADVICE	0.019	0.584	0.535	0.436	0.500	0.558	1	0.148	-0.048	0.083	0.086	0.249	0.235	0.205	-0.021	0.165
8. BIG4	-0.095	0.118	0.139	0.074	0.038	0.099	0.148	1	-0.096	0.195	0.234	0.439	0.422	0.320	-0.083	0.225
9. RELIABLE	0.143	0.016	0.046	0.039	0.040	0.018	-0.033	-0.076	1	-0.048	-0.147	-0.305	-0.250	-0.190	0.016	-0.382
10. EPROCESSES	-0.060	0.079	0.089	-0.015	0.059	-0.039	0.074	0.163	-0.021	1	0.048	0.234	0.287	0.325	0.011	0.049
11. EDUCATION	-0.061	0.093	0.114	0.049	0.024	0.024	0.083	0.226	-0.115	-0.010	1	0.349	0.266	0.306	-0.129	0.402
12. REVENUE	-0.093	0.147	0.201	0.112	0.116	0.116	0.246	0.449	-0.265	0.199	0.344	1	0.727	0.552	-0.102	0.351
13. EMPLOYEES	-0.117	0.157	0.227	0.149	0.118	0.191	0.246	0.431	-0.229	0.249	0.280	0.746	1	0.577	-0.101	0.271
14. INVOICES	-0.064	0.228	0.218	0.202	0.118	0.161	0.199	0.319	-0.185	0.208	0.294	0.553	0.559	1	-0.088	0.282
15. MANUFACT	-0.049	-0.027	-0.062	-0.050	-0.015	-0.065	-0.021	-0.083	-0.004	0.038	-0.121	-0.101	-0.127	-0.082	1	-0.022
16. NOEXTACCNT	-0.144	0.114	0.083	0.010	0.019	0.016	0.165	0.225	-0.354	0.014	0.371	0.358	0.311	0.274	-0.022	1

Table 5. Logistic regression results

<i>Variable</i>	<i>Intercept</i>	<i>BIG4</i>	<i>RELIABLE</i>	<i>EPROCESSES</i>	<i>REVENUE</i>	<i>EMPLOYEES</i>	<i>INVOICES</i>	<i>EDUCATION</i>
DECISIONMAKING	-1.577 ***	-0.212	0.249 **	-0.091	0.091	-0.078	0.029	-0.011
	0.004	0.342	0.014	0.745	0.626	0.193	0.675	0.894
TOTALBENEFITS	-1.663 ***	0.121	0.232 **	0.138	0.019	0.022	0.246 ***	-0.037
	<.001	0.552	0.012	0.591	0.914	0.698	<.001	0.623
ASSURANCE	-2.237 ***	0.096	0.305 ***	0.043	0.092	0.109 **	0.187 ***	0.011
	<.001	0.637	0.001	0.868	0.594	0.050	0.003	0.885
INTCONTROL	-2.982 ***	-0.043	0.283 **	-0.614 **	-0.080	0.103 *	0.280 ***	-0.054
	<.001	0.850	0.011	0.041	0.663	0.079	<.001	0.526
REGSADVICE	-2.375 ***	-0.196	0.269 ***	0.048	0.198	0.053	0.120 *	-0.070
	<.001	0.353	0.008	0.856	0.244	0.332	0.065	0.374
TAXADVICE	-1.924 ***	0.080	0.191 *	-0.755 ***	-0.167	0.191 ***	0.137 **	-0.097
	0.001	0.712	0.069	0.010	0.363	0.001	0.043	0.232
TECHADVICE	-2.109 ***	0.032	0.208 **	-0.007	0.305 *	0.101 *	0.072	-0.096
	<.001	0.874	0.034	0.979	0.068	0.060	0.260	0.212
VIF		1.34	1.17	1.10	2.63	2.59	1.59	1.30

Continued...

Table 5. Logistic regression results (continued)

<i>Variable</i>	<i>MANUFACTURE</i>	<i>NOEXTACCNT</i>	<i>Chi-squared model fit (p-value)</i>	<i>H-L Goodness of fit</i>	<i>Nagelkerke R²</i>
DECISIONUSEFUL	-0.719	-0.374	<.001	6.78	0.055
	0.100	0.095			
TOTALBENEFITS	-0.097	0.377	<.001	4.25	0.084
	0.783	0.061			
ASSURANCE	-0.454	0.131	<.001	4.25	0.113
	0.210	0.518			
INTCONTROL	-0.647	-0.134	<.001	12.66	0.090
	0.197	0.561			
REGSADVICE	-0.306	0.020	<.001	7.89	0.048
	0.446	0.924			
TAXADVICE	-0.785	-0.058	<.001	11.92	0.082
	0.115	0.792			
TECHADVICE	-0.218	0.522	<.001	8.46	0.108
	0.567	0.010			
VIF	1.04	1.39			