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External auditors’ reliance on internal audit: the impact of sourcing arrangements and consulting activities

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Key Words: internal audit; external auditor reliance decisions; internal audit outsourcing; internal audit consultancy activities

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Abstract

Using an experimental design, we explore whether internal audit outsourcing and the role of internal audit in systems consulting impact external auditors’ reliance on internal audit in the current governance environment. Our results indicate that involvement in consultancy activities relating to the financial reporting system impacts the extent of reliance on the work of internal audit. External auditors also make greater use of internal auditors as assistants for substantive testing when internal audit is provided in-house, suggesting an availability influence. In addition, external auditors are more likely to use internal audit for control evaluation tasks than for substantive testing.

Key Words: internal audit; external auditor reliance decisions; internal audit outsourcing; internal audit consultancy activities

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1. Introduction

External auditors’ reliance on the work of internal audit has received considerable attention from researchers for almost three decades (for example, Clark et al., 1980; Schneider, 1985; Margheim, 1986; Whittington and Margheim, 1993; Gramling et al., 2004). However, much of this research was conducted when internal audit had a narrower focus based on evaluating and strengthening internal controls. In recent years, internal audit activities have been extended so that the function has become a key corporate governance mechanism (Gramling et al., 2004, Cohen et al., 2004). This is reflected in the Institute of Internal Auditors (IIA) definition of internal auditing which stresses that internal audit is both an assurance activity and a consulting activity (IIA, 1999). At the same time, the practice of outsourcing internal audit has become increasingly prevalent (Glover et al., 2008; Ernst & Young, 2006), with internal audit services being offered by specialist providers as well as by more traditional accounting firms.

Both the provision of consulting services by the internal audit function and the sourcing arrangement of internal audit have the potential to impact internal audit objectivity. Hence, they could influence external auditors’ decisions to rely on the work of internal audit in their own financial statement audit. In this study, we use an experimental design to examine the impact of these two factors on external auditors’ reliance decisions.

We extend prior research in a number of key ways. By investigating these factors together in a 2 x 2 experiment, we are able to examine their main effects and also whether any joint effect is interactive or additive (DeZoort et al., 2001). Further, in contrast to prior studies, our sourcing arrangement manipulation involves the use of a specialist internal audit firm rather than an accounting firm as the external provider (Glover et al., 2008; Gramling and Vandervelde, 2006). Even though outsourcing to specialist firms is becoming more common, external auditors’ perceptions of this practice have not previously been investigated. In addition, this manipulation allows us to remove the possibility of group affiliation bias which can arise when auditors rely on work outsourced to another auditing firm (Gramling and Vandervelde, 2006). Our consulting manipulation examines the impact of an internal audit function that has been actively engaged in systems consulting in relation to the financial systems, an issue not addressed in prior research. A further contribution lies in our examination of the impact of internal audit on a number of audit planning decisions. These include decisions to rely on work already undertaken by internal audit and decisions to utilise internal auditors to perform certain audit tasks. For both of these decisions, we differentiate between control evaluation work and substantive testing of balances. Finally, the Australian context for our study enables us to examine the impact of these factors in an environment
where internal audit has been under-utilised (Goodwin-Stewart and Kent, 2006; Leung et al., 2004) and only recently is becoming a key governance mechanism (Ernst and Young, 2006; Cooper et al., 2006).

We find that external auditors are more likely to use internal audit to evaluate internal financial controls than for substantive testing of account balances. Further, there are no significant differences between external auditors’ use of work already undertaken by internal auditors and their use of internal auditors as assistants. Internal audit involvement in systems consultancy activities impacts the extent of external audit reliance on the work of internal audit. However, whether the function is outsourced or provided in-house does not generally impact their reliance decisions. An exception is that, even though external auditors’ use of internal auditors for substantive testing is not great, they are more likely to use in-house internal auditors to assist with these tasks.

The remainder of the paper is structured as follows. The next section discusses prior research and develops the hypotheses. The third section explains the research methods while the results of the study are reported and discussed in the fourth section. In the final section, some conclusions are drawn, the limitations of the study are acknowledged and suggestions for future research are provided.

2. Background and hypothesis development

The current governance environment has led to an increased emphasis on the relationship between internal and external auditors (Gramling et al., 2004). The economic benefits of external auditors’ reliance on internal audit work are well recognised (Glover et al., 2008). For example, Felix et al. (2001) found that audit fees were approximately 18% lower when external auditors coordinated their work with internal audit.

Both Australian and international standards require the external auditor to consider the organisational status of internal audit, the scope of the function, the technical competence of internal audit staff and their exercise of due professional care when assessing whether to rely on internal audit work (ASA 610, 2006; ISA 610, 2004). In a similar vein, current US standards require external auditors to consider the competence, objectivity and work performed by internal auditors when making reliance decisions (AU Section 322, AICPA 1991; PCAOB, 2007). The Australian standard does not deal with instances when internal auditors assist the external auditor to undertake specific audit tasks. However, the US

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1 These standards are being revised as part of the IAASB clarity project. The revised standards discuss four factors that may affect external auditors’ determination of whether internal audit work is adequate for the purpose of their audit. These factors are objectivity, technical competence, due professional care and communication.
standards do recognise that the external auditor may use internal auditors as assistants to obtain an understanding of controls, to test controls and to perform substantive tests. When direct assistance is provided, the standards require the auditor to assess internal audit competence and objectivity.

External auditors’ reliance decisions have been the focus of a large body of research, with much of the early work examining the extent to which auditors consider the key factors of objectivity, competence and work performed (see Gramling et al., 2004). More recently, other factors have been explored, including the level of coordination between internal and external audit (Felix et al., 2001), internal audit remuneration incentives (DeZoort et al., 2001), whether internal audit has primarily an auditing focus or a consulting focus (DeZoort et al., 2001), internal audit sourcing arrangement (Glover et al., 2008), task subjectivity (Glover et al., 2008; DeZoort et al., 2001), inherent risk (Glover et al., 2008; Felix et al., 2001), non-audit services (Felix et al., 2005) and client pressure to use internal audit services (Felix et al., 2005).

2.1. Internal audit sourcing arrangement

Outsourcing of internal audit activities has become commonplace in recent years (Ernst & Young, 2006; Caplan and Kirschenheiter, 2000). While it is no longer acceptable for external auditors to provide internal audit services to their audit clients (Sarbanes-Oxley Act, (SOX), 2002), outsourcing services are provided both by public accounting firms to non-audit clients and by specialist internal audit firms (Ernst & Young, 2006).

It has been argued that an in-house internal audit function may be less objective than an outsourced function as it is difficult for an employee to be truly independent of management (James, 2003, Glover et al., 2008). A hlawat and Lowe (2004) explored this issue in an experimental study where both in-house and outside internal audit providers assumed the role of internal auditor for the buyer or the seller in an acquisition target. They found that advocacy was less extreme amongst the outside providers compared to the in-house internal auditors.

It has also been suggested that outside internal audit providers, particularly the large accounting firms, offer high quality services and may have a greater level of expertise, especially with regard to specialist knowledge such as technology skills (Caplan and Kirschenheiter, 2000).2 However, outside providers lack the in-depth company knowledge possessed by in-house internal auditors (James, 2003). This reflects the IIA (1994) argument

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2 This argument is used to support the use of co-sourcing whereby an in-house internal audit function uses the services of an outside provider for specialist tasks or at peak times. Co-sourcing is not considered in the present study.
that a competent in-house internal audit department “can perform the internal auditing function more efficiently and effectively than a contracted audit service” (IIA, 1994, p. 2).

Felix et al. (2001) report that the contribution of internal audit to the external audit is related to the availability of internal auditors. It can be argued that in-house internal auditors are likely to be more available than those from an outside provider as outsourced audit teams have limited contact with the company (James, 2003). Hence, availability could lead to greater external auditor reliance on an in-house internal audit function, regardless of any differences in perceptions of internal audit quality.

Research evidence relating to the impact of internal audit outsourcing on external auditors’ decisions to rely on internal audit work is limited to just two studies. Glover et al. (2008) use attribution theory to make predictions about the impact of internal audit sourcing arrangement, inherent risk and task subjectivity on external auditor reliance decisions. Attribution theory suggests that evaluators consider whether situational factors create incentives for a source to bias their message. When evaluators assess that there are incentives to bias, they perceive the message to be less persuasive and therefore are less willing to rely on the source. In the external audit reliance setting, attribution theory suggests that external auditors will rely less on the work of internal audit when they perceive that internal audit has incentives to report in a particular way (DeZoort et al., 2001; Glover et al., 2008). Glover et al. (2008) posit that the close alignment between an in-house internal audit function and management will lead external auditors to attribute favourable internal audit reports to incentives to please or align with management. Hence, external auditors will rely more on work performed by outsourced internal auditors than by in-house internal auditors. Glover et al. (2008) also examine whether inherent risk and task subjectivity moderate the relation between the sourcing arrangement and external auditors’ reliance decisions. They find that external auditors rely more on outsourced internal auditors only when inherent risk is high. The authors also undertake path analysis to further explore whether the sourcing variable has explanatory power in addition to external auditors’ assessments of objectivity and competence. While they find that external auditors consider in-house internal auditors to be less objective than outsourced internal auditors, they also find that the sourcing arrangement does provide additional explanatory power. It should be noted, however, that the outsourcing arrangement in this study was to a Big Four accounting firm, which gives rise to the possibility of a group affiliation bias (Gramling and Vandervelde, 2006).

Gramling and Vandervelde (2006) use group affiliation theory to suggest that external auditors may be biased in their evaluations of internal audit quality when the service is performed by another public accounting firm. They conducted an experimental study with both internal and external auditors and found no difference in either group’s assessments of
competence, work performance and overall quality of work based on the sourcing arrangement. However, the external auditor respondents assessed internal audit objectivity to be higher when the provider was another accounting firm. This finding contrasted with the internal auditor respondents who assessed objectivity to be higher when internal audit was provided in-house.

In the present study, we minimise the likelihood of group affiliation bias by designating the outsource provider as a specialist internal audit and business risk consulting firm rather than a public accounting firm. Furthermore, we contrast the outsource provider with a high quality, well resourced in-house internal audit function to assess whether external auditors’ reliance decisions are affected by the sourcing arrangement in these circumstances.

In light of the arguments presented above, we predict that external auditors would perceive a specialist internal audit consulting firm to be more independent than an in-house internal audit function. As such, they are likely to be more willing to rely on work already undertaken by internal audit when the function is outsourced. However, following Felix et al. (2001 and 2005), we expect that the greater availability of in-house internal auditors is likely to lead to a greater use of internal auditors as assistants compared to when internal audit is outsourced. This leads to the following hypotheses:

H1: External auditors are more willing to rely on work already undertaken by internal audit when the internal audit function is outsourced to a specialist provider compared to when it is provided in-house.

H2: External auditors are more willing to utilise internal audit to assist in performing audit tasks when the internal audit function is provided in-house compared to when it is outsourced to a specialist provider.

2.2. Consulting role of internal audit

The IIA definition of internal auditing highlights the role of internal audit as a provider of consulting services as well as the more traditional assurance services. The change in definition is consistent with a more value-added emphasis being placed on the internal audit function (Brody and Lowe, 2000; Cashell and Aldhizer III, 2002). Research by Nagy and Cenker (2002) indicates that the change in definition simply reflects existing practice, with internal auditors having performed consulting services and other value-added activities for many years. However, concern has been expressed about the ability of internal auditors to maintain the desired level of objectivity when acting as both consultants and assurers (Brody and Lowe, 2000). This is particularly the case when internal auditors are involved in financial
systems design and then at a later stage are required to audit these systems as this poses a self-review threat (Plumlee, 1985; Church and Schneider, 1992).

Only a small number of research studies have addressed this problem. An early study by Plumlee (1985) investigated the possibility of bias when internal auditors have been involved in systems design and then subsequently review the system. The study tested memory recall abilities rather than work undertaken. Nonetheless there was some evidence that internal auditors who reviewed their own work tended to perceive internal controls to be stronger and to be less critical of control weaknesses than those who reviewed the work of others.

Church and Schneider (1992) used attribution theory to predict that internal auditors would allocate fewer audit hours to investigate irregularities when they had been involved in designing the internal controls related to a specific account. However, the authors found that participants’ allocation of audit hours did not appear to be influenced by their prior involvement in systems design. Church and Schneider (1992) suggest that their finding may mean that internal auditors are cognizant of their need to maintain objectivity in accordance with internal auditing standards and hence do not allow themselves to be influenced by their involvement in systems design.

Both Brody and Lowe (2000) and Ahlawat and Lowe (2004) examined whether internal auditors can remain objective when consulting to management in a corporate acquisition setting. Using experimental designs, the two studies involve internal auditors acting for the buyer or seller in an acquisition. Both studies found that the role the company was taking in the negotiation process influenced participants’ judgments. Internal auditors allocated to the buyer condition provided significantly higher likelihood judgments about inventory obsolescence compared to those allocated to the seller condition. These studies suggest that internal auditors who act as consultants may not be able to maintain their objectivity.

DeZoort et al. (2001) argue that a consulting role for internal audit involves participation in management decision making and the development of close working relationships with management, leading to a reluctance to report negative findings. Again drawing on attribution theory, they tested whether internal audit participation in consulting, together with eligibility for incentive compensation, influenced external audit reliance decisions. Although they found that external auditors perceived that a consulting role would reduce internal audit objectivity and increase the likelihood of acquiescence to management, consulting had little effect on actual reliance and planning decisions. DeZoort et al. (2001) speculate that a possible reason for their unexpected result is that, at the time of their study, external auditors actively provided consulting services to their audit clients, making them less
sensitive to the likelihood of bias. They suggest the need for additional research to examine whether external auditors have become more sceptical of internal audit consulting activities now that they no longer engage in such activities themselves.

DeZoort et al. (2001) examined consulting activities in general by manipulating the overall time spent on these activities rather than involvement in the design of a system which the internal auditor may subsequently need to audit. The present study examines whether internal audit involvement in consultancy activities relating to financial systems would influence external auditors’ reliance on the work of internal audit. Further, the study is undertaken at a time when the provision of non-audit services to audit clients is no longer considered appropriate. In this context, we predict that external auditors will be reluctant to rely on the work of internal auditors who have been directly involved with the design of financial systems. We also expect that they will be less willing to use these internal auditors as assistants. We therefore test the following hypotheses:

H3: External auditors are more willing to rely on work already undertaken by internal audit when internal auditors are not involved in systems consultancy compared to when they are involved in systems consultancy.

H4: External auditors are more willing to utilise internal audit to assist in performing audit tasks when internal auditors are not involved in systems consultancy compared to when they are involved in systems consultancy.

2.3. The joint effect of source arrangement and consulting role

DeZoort et al. (2001, p. 264-265) draw on attribution theory and other psychology research to argue that the effect of multiple incentives to bias on evaluators’ attributions “is additive rather than interactive.” This suggests that external auditor reliance on the work of internal audit will decrease in proportion to the number of incentives that internal auditors have to bias their reports. Accordingly, DeZoort et al. (2001) do not expect an interaction effect between the amount of time that internal auditors spend on consulting activities and internal audit incentive compensation. Unexpectedly, however, their results show a significant interaction effect between these two factors and their dependent variable of budgeted audit hours. The authors tentatively suggest that this might be because external auditors are reluctant to reduce their own testing beyond a minimum threshold. In the context of our study, we explore whether the joint effect of the sourcing arrangement and consulting activities is additive or interactive, without making a prediction.

3. Research methods
In order to test our hypotheses, we used a 2 x 2 between-subjects design, resulting in four cases. The internal audit sourcing arrangement was manipulated as being in-house or outsourced to a specialist provider while the second manipulation related to whether or not internal audit was involved in systems consultancy with respect to the company’s financial system.

3.1. Research instrument

The instrument was divided into three parts, together with an instruction sheet. Parts A and B consisted of the two scenarios, each followed by a series of questions. The third part of the instrument contained some questions relating to the participant’s background. The instrument was tested using a group of final year auditing students, academics with auditing experience and four audit practitioners. The preliminary testing confirmed the strength of the manipulations. However, as the study was not administered in a controlled environment, we did not include specific manipulation checks to minimise the possibility of demand effects.

3.2. Participants

Participants in the study consisted of 66 partners, managers and seniors from the Big Four and two mid-tier audit firms in five major Australian cities. A partner in each firm agreed to distribute copies of the instrument to colleagues who had clients with an internal audit function. Responses were mailed directly to the researchers in a reply-paid envelope. A total of 98 instruments were distributed, with 66 usable responses being received, giving a response rate of 67%.

While the mid-tier firms agreed to participate, only four responses were received from these firms, owing to a lack of clients with internal audit functions. Almost 70% of participants hold the rank of manager or partner. Approximately 58% are males and just over half are thirty years of age or less. The mean years of experience are slightly more than ten, ranging from a minimum of two years to a maximum of 36 years. The number of clients using internal auditors varies from one to twelve, with a mean of four. Analyses of variance (ANOVA) and co-variance (ANCOVA) were used to test for differences in responses due to firm, rank, age, gender and experience. None of these factors had a significant impact on our reported results.

3 The research instrument contained two scenarios relating to external auditors’ reliance on the work of internal audit. The other scenario is the subject of a separate paper. The manipulations for that scenario were internal audit’s relationship with the audit committee and the client’s risk and governance environment. To reduce the risk of confounding effects, the four versions of one scenario were randomly mixed with the four versions of the other. This resulted in 16 versions of the instrument. Importantly, it should be noted that we did not change the order of the two scenarios and hence there are no order effects to consider.

4 Qualitatively similar results are obtained when these four respondents are omitted from the sample.
3.3. The scenario

The scenario used in the experiment described a listed company in the paper packaging industry. Background information indicated that the company was profitable, with a sound performance trend and strong corporate governance. Over the last two years, the company had been installing enterprise resource planning (ERP) technology to integrate its business and information processes, including its financial systems. Participants were told that their firm had recently been appointed as auditor and the client’s management had expressed a desire for a close working relationship between external and internal audit. This would involve the exchange of audit plans, programs, findings and reports. The firm had also been asked to consider the extent to which the audit team could rely on the work of internal audit.

3.4. Independent variables

The first independent variable is the sourcing arrangement. In the in-house internal audit condition, the company was described as having its own internal audit function with eight full time permanent staff and a budget of $1.25 million. The Chief Audit Executive had more than ten years experience in internal audit and was a Certified Internal Auditor. He reported to the managing director on an administrative basis and functionally to the audit committee. The other staff were all qualified in either accounting or information systems. There were two internal audit managers with more than six years internal audit experience while the experience of the other staff ranged from one to five years. This description was designed to portray a well staffed, experienced and adequately resourced internal audit function. In the outsourced condition, participants were informed that the company did not have its own internal audit function but that it outsourced internal audit activities from a leading internal audit and business risk consulting firm. The partner-in-charge of internal audit services reported to the managing director on an administrative basis and functionally to the audit committee. Again, the internal audit budget was $1.25 million. A specialist internal audit and business risk firm was chosen to reduce the possibility of “group affiliation” bias (Gramling and Vandervelde, 2006, p. 28) resulting from using a public accounting firm.

The second independent variable is internal audit’s involvement or otherwise in systems consultancy. In the consultancy condition, participants were told that approximately 50% of internal audit time was devoted to assurance work and 50% to systems consultancy. Internal audit had been heavily involved in installing ERP technology to integrate its business and information processes, including its financial systems. During the system-design phase, internal audit assisted in the establishment of system access for employees and in the development of the user authorisation request and approval process. In addition, the internal audit information systems specialists had just designed and implemented an analysis tool to
test segregation of duty controls at various transaction levels. In the alternative treatment condition, participants were told that approximately 50% of internal audit time was devoted to assurance work and 50% to special projects such as performance audits. A similar description of the ERP installation was provided but, in this treatment, the company had engaged outside systems consultants from a large professional services firm.

3.5. Dependent variables

Participants were asked to provide preliminary assessments of the extent to which they would be prepared to rely on work already undertaken by internal audit and also the extent to which they would be prepared to utilise internal audit to assist in performing audit tasks. In each case, these questions were divided into two parts, the first relating to the evaluation of internal financial controls and the second to substantive tests of account balances. For all four dependent variables, an 11-point scale was provided, with end points of zero (to a very limited extent) and ten (to a very great extent).

4. Results

4.1. Descriptive statistics

Table 2 summarises the descriptive statistics for the four dependent variables. These statistics provide useful insights into external auditors’ reliance decisions in the Australian context. Panel A reports the means and standard deviations for external auditors’ reliance on work already undertaken by internal audit while Panel B reports the same statistics for using internal auditors as assistants. Matched pairs t-tests indicate that the differences in means between relying on work already undertaken and using internal auditors as assistants are not statistically significant. This finding is interesting given that the Australian standard only focuses on external auditors’ reliance on work already undertaken and does not consider the use of internal auditors as assistants. Our results suggest that, in spite of the lack of guidance provided by auditing standards, the practice of using internal auditors as assistants is quite prevalent.

Panel A of Table 2 shows that the means across the four treatment groups for reliance on work already undertaken by internal auditors range from 5.53 to 6.69 for control evaluation and 3.47 to 4.44 for substantive testing. Matched pairs t-tests indicate that the differences in these means are statistically significant (p = 0.001). Hence, it is clear that participants are more likely to rely on internal audit for control evaluation work than for substantive testing of balances.
It is also interesting to note that the standard deviations for control evaluation are smaller than those for substantive testing, indicating less variability in responses relating to control evaluation. The frequency distribution for control evaluation (untabulated) indicates that almost 70% of responses exceed the midpoint of five while only 14% of participants selected three or less. In contrast, the frequency distribution for substantive testing indicates that 47% of participants selected three or less, with only 39% of responses exceeding the midpoint of five.

Panel B of Table 2 shows that the means across the treatment groups for using internal auditors as assistants vary from 4.74 to 6.88 for control evaluation work and from 3.67 to 5.31 for substantive testing work. Matched pairs t-tests again indicate that the results for control evaluation are significantly different from those for substantive testing. Thus, consistent with the results for external auditor reliance on work already undertaken by internal auditors, external auditors are more likely to use internal auditors as assistants for control evaluation work than for substantive testing. The frequency distributions (untabulated) indicate that 68% of responses exceed the midpoint of 5 for control evaluation, compared to 35% for substantive testing. The percentage of participants selecting 3 or less amounted to 18% for control evaluation and 38% for substantive testing.

### 4.2. Analysis of variance

Table 3 reports the results of the analysis of variance used to test the hypotheses. Panel A shows that there are no significant differences between the two types of sourcing arrangement. Thus H1 is not supported. Internal audit involvement with systems consulting has a significant impact on external auditors’ reliance decisions for control evaluation (p = 0.008) but not for substantive testing. Thus, there is support for H3 for control evaluation but not for substantive tests of balances. The interaction effect between the two variables is not significant.

Panel B reports the test results for H2 and H4 relating to the use of internal audit as assistants in performing audit tasks. Similar to the results in Panel A, only the role manipulation is significantly different for control evaluation work. However, there is a marginally significant difference (p = 0.054) for the source manipulation with respect to substantive testing of balances. The means reported in Table 2 indicate that participants believe that they are more likely to use internal auditors as assistants for substantive testing when internal audit services are provided in-house compared to when they are outsourced. This result suggests that the availability of internal auditors to act as assistants impacts external auditors’ willingness to use them to assist with this type of testing. Hence, H2 is
supported only for substantive testing. In contrast, H4 is supported for control evaluation but not substantive testing. Again, the interaction effect is not significant.

Overall, these results indicate that participants were insensitive to possible differences in internal audit objectivity arising from the sourcing arrangement. This suggests that external auditors regard internal audit services provided by a high quality in-house function to have similar standards of objectivity to those that are outsourced to a specialist internal audit and business risk firm. This finding is interesting as it contrasts with that of Glover et al. (2008) who found that external auditors considered in-house internal auditors to be less objective than when internal audit was outsourced to a Big Four accounting firm. The difference in results can be explained by Gramling and Vandervelde’s (2006) suggestion that group affiliation theory leads external auditors to bias their evaluations of internal audit objectivity when the service is performed by a similar public accounting firm. Further exploration of these different results is a fruitful avenue for future research. Additionally, our finding with respect to using internal auditors as assistants for substantive testing work provides further support to Felix et al.’s (2001 and 2005) suggestion that this practice is driven by the availability of in-house internal auditors to provide such assistance.

As far as control evaluation work is concerned, external auditors rely less on work performed by internal audit and will also use internal auditors as assistants to a lesser extent when internal audit has been directly involved in financial systems consultancy. This shows that, while external auditors’ reliance decisions in relation to substantive testing are not affected by internal auditors’ involvement in systems consultancy, they are sensitive to the possibility of internal audit self-review as far as evaluating internal controls is concerned. This finding contrasts to that of DeZoort et al. (2001) who did not find support for their hypothesis that internal audit engagement in consulting activities would influence external auditor reliance decisions. These conflicting results could be due to the different nature of the manipulation, with DeZoort et al. (2001) manipulating the overall extent of time spent on consulting activities by internal audit, compared to the present study’s manipulation of a direct involvement in consulting related to the financial system. DeZoort et al. (2001) also suggest that their lack of a result may be due to the time period of their study which was undertaken at a time when external auditors themselves actively engaged in consulting to their audit clients. Given that our study was undertaken more recently when the provision of non-audit services is no longer acceptable, it is possible that external auditors’ views have changed. Hence, again there is a need for further research to explore in greater depth the reason for these contrasting findings.

While we did not predict any interaction effects between the two factors tested in this scenario, it is interesting to note that none of the interactions are significant. Hence, the
impact of systems consultancy on external auditors’ reliance decisions is not dependent on whether internal audit is provided in-house or is outsourced.

5. Conclusion

This study examined two factors that may influence external auditors’ reliance on the work of internal audit in the current governance environment. The internal audit sourcing arrangement and internal audit’s involvement in systems consultancy were manipulated. The systems consultancy manipulation was significant for control evaluation work, both with respect to reliance on work undertaken and using internal auditors as assistants. However, the consultancy manipulation was not significant for substantive testing. As far as the sourcing arrangement is concerned, external auditors generally do not differentiate between a high quality in-house function and a specialist internal audit outsource provider when relying on work already undertaken by internal audit. However, a marginally significant finding that external auditors are more willing to use internal auditors as assistants for substantive testing work is consistent with our prediction that the availability of internal auditors would impact on this reliance decision.

There are a number of limitations of our study which should be borne in mind when interpreting the findings. Our sample size is relatively small and, as with all experimental designs, the findings of our study may not be generalisable to other populations. We did not include manipulation checks in the instrument to avoid the possibility of demand effects in a non-controlled experiment. While our preliminary testing was designed to confirm the strength of our manipulations, we cannot be certain that all participants interpreted the manipulations as intended.

In spite of these limitations, our results have important implications for regulators and others concerned with the role of audit in corporate governance. The need for strong governance has led to increasing costs of compliance and hence determining the most efficient and effective balance between internal and external auditing remains a challenge. The present study highlights some additional factors that can affect external auditors’ reliance on internal audit work in the current governance environment. When internal auditors engage in systems consulting, the possibility of a self-review threat is likely to reduce their contribution to the external audit. Hence, firms need to consider the trade-off between the added value from having internal audit engage in consulting activities and the additional external audit fees that could arise because of a lack of reliance on internal audit work. More in-depth analysis of this trade-off is an important avenue for future research.
Further research could also be undertaken to examine other aspects of the factors explored in this study. For example, many firms co-source internal audit services from an in-house function and an outside provider but the impact of this practice on external auditors’ reliance decisions is relatively unexplored. The present study examined internal audit’s involvement in consultancy directly related to financial statement systems. While other studies have examined whether internal auditors advocate their firm’s position when advising management, there are many other types of consultancy work that could be examined in the context of external auditor reliance. For example, internal auditors are playing an increasingly important role in risk management but we know little about how this impacts external auditors’ decisions to rely on their work. Finally, as noted, the contrasting findings of this study with those of two North American studies indicate the need for further research to determine more conclusively the causes of these differences.
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James, K., 2003, The effects of internal audit structure on perceived financial statement fraud prevention, Accounting Horizons 17, 315-327.


Table 1: Biographic information of participants

<table>
<thead>
<tr>
<th>Category of Firm:</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Four</td>
<td>62</td>
<td>93.9</td>
</tr>
<tr>
<td>Middle Tier</td>
<td>4</td>
<td>6.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position:</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>17</td>
<td>25.8</td>
</tr>
<tr>
<td>Manager</td>
<td>29</td>
<td>43.9</td>
</tr>
<tr>
<td>Senior</td>
<td>20</td>
<td>30.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender:</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>38</td>
<td>57.6</td>
</tr>
<tr>
<td>Female</td>
<td>28</td>
<td>42.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group:</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 30</td>
<td>34</td>
<td>51.5</td>
</tr>
<tr>
<td>31 – 40</td>
<td>19</td>
<td>28.8</td>
</tr>
<tr>
<td>Over 40</td>
<td>13</td>
<td>19.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>St. dev.</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of experience</td>
<td>10.8</td>
<td>8.0</td>
<td>36.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Number of clients with</td>
<td>4.0</td>
<td>2.0</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>internal audit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: The impact of outsourcing and consultancy role on external auditors’ reliance decisions: Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Evaluation of internal controls</th>
<th>Substantive tests of balances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consulting Role</td>
<td>No Consulting Role</td>
</tr>
<tr>
<td><strong>Panel A: Work Already Undertaken by Internal Audit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outsourced IA Provider</td>
<td>5.53 (2.07)</td>
<td>6.50 (1.37)</td>
</tr>
<tr>
<td>n = 15</td>
<td>n = 16</td>
<td>n = 31</td>
</tr>
<tr>
<td>In-house IA Provider</td>
<td>5.53 (1.87)</td>
<td>6.69 (1.58)</td>
</tr>
<tr>
<td>n = 19</td>
<td>n = 16</td>
<td>n = 35</td>
</tr>
<tr>
<td>Overall</td>
<td>5.53 (1.93)</td>
<td>6.59 (1.46)</td>
</tr>
<tr>
<td>n = 34</td>
<td>n = 32</td>
<td>n = 66</td>
</tr>
<tr>
<td><strong>Panel B: Using Internal Auditors as Assistants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outsourced IA Provider</td>
<td>5.33 (2.29)</td>
<td>6.88 (1.31)</td>
</tr>
<tr>
<td>n = 15</td>
<td>n = 16</td>
<td>n = 31</td>
</tr>
<tr>
<td>In-house IA Provider</td>
<td>4.74 (2.68)</td>
<td>6.63 (1.96)</td>
</tr>
<tr>
<td>n = 19</td>
<td>n = 16</td>
<td>n = 35</td>
</tr>
<tr>
<td>Overall</td>
<td>5.00 (2.50)</td>
<td>6.75 (1.65)</td>
</tr>
<tr>
<td>n = 34</td>
<td>n = 32</td>
<td>n = 66</td>
</tr>
</tbody>
</table>

*11-point scale (0 [to a very limited extent] – 10 [to a very great extent])
Table 3: The impact of outsourcing and consultancy role on external auditors’ reliance decisions: Analysis of variance

<table>
<thead>
<tr>
<th>Panel A: Work Already Undertaken by Internal Audit</th>
<th>Evaluation of internal controls</th>
<th>Substantive testing of balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of variation</td>
<td>Mean Square</td>
<td>F</td>
</tr>
<tr>
<td>Provider (P)</td>
<td>.133</td>
<td>.044</td>
</tr>
<tr>
<td>Role (R)</td>
<td>18.534</td>
<td>6.115</td>
</tr>
<tr>
<td>P x R</td>
<td>.155</td>
<td>.051</td>
</tr>
<tr>
<td>Mean Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P value^</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B: Using Internal Auditors as Assistants</th>
<th>Evaluation of internal controls</th>
<th>Substantive testing of balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of variation</td>
<td>Mean Square</td>
<td>F</td>
</tr>
<tr>
<td>Provider (P)</td>
<td>2.933</td>
<td>.635</td>
</tr>
<tr>
<td>Role (R)</td>
<td>48.153</td>
<td>10.420</td>
</tr>
<tr>
<td>P x R</td>
<td>.491</td>
<td>.106</td>
</tr>
<tr>
<td>Mean Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P value^</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^ One-tailed where in direction predicted