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OUTSOURCING OF INTERNAL AUDIT SERVICES IN AUSTRALIAN FIRMS: SOME PRELIMINARY EVIDENCE

Divesh S. Sharma[1] and Nava Subramaniam[2*]

[1]*Faculty of Business, Auckland University of Technology, New Zealand*
[2]*Department of Accounting, Finance and Economics, Griffith Business School Griffith University[+], Australia*

*Corresponding author: n.subramaniam@griffith.edu.au

ABSTRACT

Although internal auditing (IA) services have been traditionally performed in-house, organizations are increasingly outsourcing such services. Using a Transaction Cost Economics (TCE) perspective, this study examined the influence of several organizational-level variables on the decision to outsource or in-house their internal audit function. The study also identified the type of IA services that were likely to be out-sourced rather than in-housed, the extent to which incumbent external financial statement auditors participated in outsourced arrangements and the level of interaction between the internal audit provider and audit committees. The results have implications for auditor independence, corporate governance and organizational performance.

Keywords: internal audit, outsourcing, in-housed internal audit

INTRODUCTION

Over the years, the internal audit (IA) function has evolved from the traditional 'watchdog of controls' to a value-added business function. The American Institute of Internal Auditors (IIA) defines IA as 'an independent appraisal function established within an organization to examine and evaluate its activities as a

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service to the organisation'. While the IA function has traditionally been performed in-house, there is an increasing trend to outsource IA activities (Martin & Lavine, 2000; Rittenberg, Moore & Covaleski, 1999). For example, a survey of 1300 internal audit directors in North America (Martin & Lavine, 2000) reveal that 25% of U.S. and 31.5% of Canadian organizations outsource their internal audit function. Some commonly cited reasons for outsourcing the IA function include cost savings, purchase of more technologically competent expertise, improved risk coverage, avoidance of investment in a non-core operation and, consequently, improved organisational performance (Shapoff, 1999; Crawford, Mathews & Cooper, 1996). On the other hand, some of the reasons for not outsourcing relate to inefficiencies created through external providers' lack of firm-specific knowledge and their propensity to engage in opportunistic behaviour (Martin & Lavine, 2000; Verschoor, 1992). A study by Rittenberg and Covaleski (1997) published by the IIA Research Foundation suggests that outsourcing is neither inherently good nor evil, and that outsourcing arrangements sometimes work and sometimes fail.

Much of the empirical evidence on the factors that influence the decision to outsource or in-house IA activities unfortunately is anecdotal with scarce empirical studies systematically examining factors that affect the decision to outsource. The research on how the outsource decision factors are related to the outcome is virtually non-existent. Further, there is scant empirical evidence on the practice of outsourcing IA activities in Australian firms. Mathews, Cooper and Leung's (1993) survey of chief executive officers and internal audit managers in Australian firms provides some description of IA activities. For example, 50% of the respondents reported having outsourced the entire IA function and 53% of the respondents indicated that the major provider of the outsourced IA services was the organization's external auditor. Their research, however, was descriptive and does not investigate the antecedents and consequences of outsourcing. The more recent study by Subramaniam et al. (2004) investigated IA outsourcing practices in public sector agencies, and found that the main reasons for outsourcing include to gain technological know-how and to gain better service quality rather than for financial reasons. Evidence from the private sector, however, is lacking with the rationale for adopting an internal audit function and incentives for outsourcing versus establishing in-house facility remaining indeterminate. The objective of this paper is to extend prior research and to advance our understanding of the relative influence of different organisational factors on the decision to either outsource or in-house IA activities.

In this study, we use Transaction Cost Economics (TCE) (Coase, 1937; Williamson, 1996) to identify organisational-related factors that are likely to affect the decision to either outsource or in-house IA services. TCE offers a useful framework for understanding the conditions under which IA outsourcing is

likely to benefit organisations. A basic assumption of TCE is that organisations must choose between alternative governance structures in acquiring their inputs. Market contracting (including outsourcing arrangements) is a form of governance when firms rely on outside suppliers, while organisational hierarchy or structure is the form of governance used when firms rely on internal employees. TCE also argues that firms will pursue the least expensive and the highest-quality-producing governance structure determined by an analysis of the total transaction costs associated with a given structure.[1]

Our data reveal the following. Three distinct groups of respondents were identified among those utilising some form of IA service – respondents who completely outsourced all IA activities, those who completely used in-house IA facilities, and those who undertook a combination of outsourced and in-house IA facilities. The results were consistent with the hypothesis that firms experiencing higher environmental uncertainty tend to outsource low levels of IA whereas firms experiencing lower environmental uncertainty tend to outsource comparatively higher levels of IA. Our results do not provide support for the asset specificity, size and cost pressure hypotheses. We do report evidence of factors deemed important for the decision to outsource or use in-house IA, and the perceived benefits of outsourcing and in-house IA. The remainder of the paper is organised as follows. The next section provides a theoretical background of TCE and development of hypotheses, followed by explanation of the method for the study and results. We then discussed the findings and further provides the conclusions and suggests opportunities for future research.

THEORETICAL BACKGROUND

According to TCE, the selection of the governance structure will depend upon a combination of environmental and human factors. Environmental factors involve three classes of transaction costs, namely, uncertainty, asset specificity and frequency (Williamson, 1975). Uncertainty relates to variations in activities as a function of environmental complexity and dynamism *(environmental uncertainty)* and the ability to monitor activities *(behavioural uncertainty)*. Asset

[1] These transaction costs include the unit price, the expected costs associated with forming and maintaining contractual and employment relationships, and the costs of monitoring performance and quality (Williamson, 1975). Further, transaction costs also include the costs generated by opportunistic behaviour by service providers whom the firm has grown to be dependent upon. Some examples of opportunistic behaviour include cost-cutting by reducing service quality in areas not specified in the contractual agreement, excessive charges for adjustments or add-ons during the contract period and inflated prices at contract renewal.

specificity refers to the degree to which assets needed to perform an activity are not transferable to other activities, and frequency is a function of the volume or rate at which activities occur. Proponents of TCE argue that an increase in any or all of the three environmental attributes increases the likelihood of adopting an organizational hierarchy form (i.e. in-house service). This is because when uncertainty, asset specificity and frequency of transactions are high, in-house services are likely to be more cost-efficient through economies of scale and less costly in terms of human factors such as bounded rationality and opportunism. Human factors such as bounded rationality refers to the computational limits faced by human beings when processing information (Marginson, 1993) and opportunistic behaviour suggests that individuals are likely to behave opportunistically. Thus, in situations of high uncertainty, transaction costs related to human factors tend to increase because (1) contracts cannot be complete as not all contingencies are foreseeable, and (2) individuals are expected to take advantage of contract ambiguities. As such, outsourcing arrangements are seen to be generally more risky and to entail higher transaction costs than in-house arrangements in situations of high uncertainty.

TCE has been used to explain a variety of firm activities such as outsourcing of HR practices (Klass, McClendon & Gainey, 1999), transfer pricing policies (Colbert & Spicer, 1995), healthcare quality (Stiles & Mick, 1997) and make-or-buy decisions (Walker & Weber, 1984). Widener and Selto (1999) provide interesting insight on why firms outsource IA from a TCE perspective. Their findings support significant associations between several types of transaction costs and the degree to which IA is outsourced. Based on data from 83 randomly selected Compustat firms with more than 500 employees, Widener and Selto (1999) found that both asset specificity and firm strategy were strong indicators of whether a firm outsources IA. More specifically, the findings suggest that IA tends to be outsourced for firms that work with low levels of firm specific or proprietary knowledge and for firms following a defender strategy (Porter, 1980). Their findings, however, did not support the hypothesis that firms with high uncertainty tend to in-house IA services. Likewise, no support was found for the hypotheses that increasing frequency of IA services will lead to higher levels of outsourcing of IA activities. The study suggested that the insignificant results, particularly for environmental uncertainty, may relate to weak measures of the variable and that future research ought to improve measures of uncertainty. Our study extends the prior literature by adopting a more reliable measure of environmental uncertainty. It also adds to the burgeoning literature by exploring the antecedents and consequences of the decision to outsource or implement an in-house audit function. We also add to the literature by examining these relationships in a smaller market and one on which IA research is scarce.

In the present study, we assume that organisations are likely to differ in their vulnerability to the costs associated with outsourcing arrangements and that there will be a direct relationship between such costs and the decision to either outsource or in-house. In the following sections, we develop hypotheses on the relationship between organizational factors and the decision to outsource. The organizational factors we examine are environmental uncertainty, specificity of IA practices, firm size, and cost pressures.

Hypotheses Development

Perceived Environmental Uncertainty

Proponents of TCE hold that *the level of uncertainty facing a firm has the potential to affect the transaction costs associated with alternative governance structures* (Williamson, 1996; Milgrom & Roberts, 1990). The level of uncertainty facing a firm, in turn, may differ according to the environment in which a firm operates. For example, Miles and Snow (1978) found that industry specific characteristics affect both the level of predictability of the actions of customers, suppliers, and unions and the technological sophistication of a firm. With increasing uncertainty, it follows that organizations will experience greater exceptions in transaction processing and increased risk of non-compliance with organizational policies and procedures. Consequently, the level of environmental dynamism will also affect the nature and extent of internal audit activities.

Widener and Selto (1999) argue that unpredictable IA activities will tend to be conducted in-house as external contracts for such IA activities will attract 'spot' pricing which is generally higher than negotiated, long-term prices. Thus, as firms perceive high environmental uncertainty, increased amounts of outsourcing will lead to lower financial benefits as transaction costs increase. In contrast, for firms experiencing low environmental uncertainty, increased amounts of outsourcing will lead to greater benefits. This is because IA activities are more predictable and firms will be able to negotiate more cost-efficient contracts. We therefore hypothesise that:

Hypothesis 1

The level of environmental uncertainty is higher for firms using low level of IA outsourcing than for firms using high levels of IA outsourcing.

Specificity of IA Practices

Increasing asset specificity denotes the inability to redeploy an asset, may it be tangible or intangible, for use in other activities. From an IA viewpoint, its assets

may relate to human expertise, proprietary information, and firm-specific technical knowledge. Varying IA activities may demand different levels of such information or knowledge. For example, firms that have inventory control systems that are more general and common in nature are likely to entail less specific IA activities, and thus the audit of its controls is less specific (i.e. entails lower asset specificity). Thus, IA knowledge and expertise that are generally applicable to many firms will be more cost-efficient as IA providers can benefit from economies of scale. The risk of opportunistic behaviour by IA providers also would be low given the low risk of exploitation of clients' special circumstances. Thus, for firms with low asset specificity (i.e. low specialised knowledge), increased amounts of outsourcing is expected to lead to greater perceived benefits.

On the other hand, if the required knowledge or expertise are highly firm-specific, the transaction costs of outsourcing will be high. For one, outsourcing IA increases the risk of firm specific knowledge to be obtained by a third party (e.g. competitors or suppliers) which potentially can be used to the detriment of the firm (Widener & Selto, 1999). Given that no contract or any market force can fully protect a firm fully in regards to safeguarding such knowledge, IA activities requiring highly specific assets will entail high transaction costs unless they are conducted in-house. Therefore, for firms with high asset specificity (i.e. highly specialised IA knowledge), increased amounts of outsourcing is likely to lead to lower perceived benefits. Hence, we hypothesise that:

Hypothesis 2

The level of asset specificity of IA activities is higher for firms using low levels of IA outsourcing than for firms using high levels of IA outsourcing

Firm size

TCE proponents hold that with increasing frequency of activities, firms may benefit through economies of scale (Williamson, 1996). Firm size is likely to affect the frequency of IA activities. IA activities such as review of internal controls and asset safe-guard measures are a function of the total number of controls or quantity of assets held. Thus, a small firm with a less complex and varied internal controls and asset structure will tend to entail lower frequency of activities than a large firm. As a result, IA activities in smaller firms will be infrequently performed, and because of high costs associated with acquiring the expertise of performing such IA activities, the per unit costs associated with providing such services in-house will be relatively more expensive. Therefore, for smaller firms, increased amounts of outsourcing will lead to higher perceived

benefits. On the other hand, for larger firms, the per unit costs of IA activities will be lower, and in-house IA will be preferred.

Hypothesis 3

The size of the firm is larger for firms using low levels of IA outsourcing than for firms using high levels of IA outsourcing

Cost pressures

Different firms face different levels of pressure to reduce costs. Consequently, the value placed on cost savings by managers may vary across different firms (Williamson, 1996). Outsourcing has often been argued to offer immediate cost savings because of efficiencies created by economies of scale and market competition (Klass, McClendon & Gainey, 1999). Thus, with mounting pressure to cut costs, a manager is likely to select or increase the level of outsourced IA activities and ignore increased risk of opportunistic behaviour over the long term by external providers of IA. Thus, greater IA outsourcing is expected to be positively related to firms facing severe cost pressures than otherwise. Thus, we predict that:

Hypothesis 4

The level of cost pressure will be lower for firms using low level of IA outsourcing than for firms using high levels of outsourcing.

METHOD

Procedure

We developed an IA questionnaire through a consultative process. Initially, we consulted the literature to identify issues related to IA outsourcing. This was followed by discussions with the Institute of Internal Auditors (Australia). From the merger of these two processes, we designed a survey questionnaire targeted at internal audit managers or an appropriate person such as the financial controller. The draft questionnaire was discussed with the Institute of Internal Auditors (Australia). Following minor amendments, we pilot tested the questionnaire with eight companies and some editorial changes were made. The final questionnaire with a cover letter and a reply paid self addressed envelope was then sent to the internal audit manager or financial controller of the randomly selected sample. Questionnaires were sent to the internal audit manager or financial controller because they are persons who would have intricate knowledge of IA activities in

their company. Follow-up telephone discussions with several respondents indicated that the questionnaire was easy to follow and understand.

Sample

The sample for this study was randomly selected from the Top 500 listed Australian companies. The Top 500 was derived based on market capitalisation as at 31 March 2000. Restricting the sample to the larger companies was necessary because prior research (e.g. Widener & Selto, 1999) shows that larger companies are more likely to implement an IA function. From this initial sample, we randomly selected 350 companies and a total of 87 responses were received. This generated a response rate of approximately 25%. This response rate is similar to Widener and Selto (1999) where the obtained response rate was 33% in a larger market (U.S.A.). Of the 87 responses, 37 did not have an IA function. Thus, our usable sample relating to the mode of IA was 50. We tested for non-response bias by randomly telephoning 15 companies. Discussions with either the financial controller or accountant revealed the following: three companies stated it was company policy to not respond to questionnaires, 10 stated that they did not have an IA function and two stated that whilst they had an IA function they did not have the time to participate in the study. Given that 10 out of 15 companies did not have an IA function and on the basis of extrapolation, our non-response bias test suggests that companies not responding are unlikely to have an IA function. However, this conclusion and the results of the study should be interpreted in the context of the sample studied and any generalisations should be cautiously made.

Variables

Dependent variable

IA Outsourced

We developed three categories for our dependent variable, *viz*., completely outsourced, some outsourced and completely in-house. Recall that out of 87 useable responses, 37 (44%) respondents did not use any IA services in the last financial year. Of the remaining 50 firms, 20 (40%) firms used in-house IA services, 12 (23%) completely out-sourced their IA services, and 18 (36%) used both in-house and out-sourced IA services. Thus, more than half the respondents implemented some form of IA activity. Given our small sample size (n = 50), we

resorted to non-parametric univariate tests for our hypotheses.[2] In particular, since we needed to compare relatively small sample sub-sets, for example, firms that outsourced completely (n = 12) with those adopting partial outsourcing (n = 18), the use of non-parametric statistics was seen to be most appropriate where inferences may be made regardless of the shape of the population distribution (see Sanders, Eng & Murph, 1985: 433–434).

Independent variables

Perceived Environmental Uncertainty (PEU)

Perceived Environmental Uncertainty (PEU): measures the unpredictability in the actions of customers, suppliers, competitors and regulatory groups. A modified version of the Miles and Snow (1978) instrument, adopted and proven reliable by prior research (e.g. Govindarajan, 1984; Mia, 1989) was used. On a 7-point scale [ranging from (1) highly predictable to (7) highly unpredictable], the instrument required respondents to rate the following factors: manufacturing/service technology, competitors' actions, demand for products/services, changes in product/service attributes and design, availability of inputs (e.g. materials, labour, technology, expertise, etc.), price of inputs (e.g. materials, labour, technology, expertise, etc.), government regulation, and labour union actions.

A factor analysis using principal component analysis with varimax rotation indicated a three-dimensional construct. The first six items loaded on one factor and explained 37% of the variance. Items seven and eight had cross-loadings of greater than 0.40 on two separate factors. Accordingly, the first six-items were averaged to measure PEU and a Cronbach alpha of 0.81 indicated satisfactory internal reliability.

Asset Specificity

Based on Widener and Selto (1999), two modified measures were used to assess the level of asset specificity. The first related to the desire to protect information proprietary to the company. Using a 7-point scale, each respondent was asked to rate the importance of this factor in their decision to outsource or in-house IA activities. The second related to whether the in-house IA department was used as a training programme for other positions. A yes response implied that there is greater asset specificity such that employees in those firms hold knowledge

[2] We are unable to employ multivariate tests such as probit or multinomial logit because of the likelihood of low powered statistical analysis. For an exploratory study, the use of univariate non-parametric tests is acceptable.

specific to the firm and training was a process for proliferating that knowledge throughout the firm.

Firm Size

The natural log of total assets was used to measure firm size. Similar results were obtained when sales/total assets was used.

Cost Pressure

A modified version of the instrument used by Klass et al. (1999) was adopted to ascertain the degree to which a firm faces pressure to reduce costs. The instrument comprises the following five items whereby each respondent was asked to indicate 'the degree to which their firm in the last financial year' had (1) emphasised reducing administrative costs, (2) reduced labour costs to remain competitive, (3) faced pressure to reduce fixed costs, (4) went through reengineering and/or restructuring, and (5) downsized its various operations. Principal components factor analysis indicated a single construct that explained 69% of the variance. Each respondent's score was averaged to measure cost pressure. This process yielded a Cronbach alpha of 0.88.

RESULTS

The Provider for Outsourced IA

Forty-seven percent of respondent firms indicated that the incumbent external financial statement auditor was responsible for all of the outsourced IA services. Twenty-one percent indicated outsourcing part of the IA services to their incumbent external financial statement auditor. Thus, in this study 68% of respondents had outsourced all or some of their IA function to their incumbent financial statement auditor. In comparison to Mathews, Cooper and Leung (1993) reporting 53% of respondents outsourcing all or some of their IA function to their incumbent financial statement auditor, the present findings suggest an increasing trend in the practice of outsourcing IA to the incumbent financial statement auditor.

Further, the proportion of outsourced IA services used for external audit purposes ranged between 0 to 100% with a 35% median. These findings raise issues relating to the link between outsourcing of IA services and the audit function. One of the implications relates to knowledge spillovers accruing to the external auditor thus generating efficiencies and hence economic rents. In a competitive audit market such as Australia, the joint provision of non-audit

services (providing internal audit services) and audit services could raise implications for auditor independence.

While the coupling of the external audit with the internal audit function may be seen as a natural extension of the external auditor's work for the client, recent debate on the matter suggest such involvement by the external auditor is fraught with the potential for lack of objectivity or independence [refer to POB (1994) and Nutt, Jenkins & Haynes (1998) for a detailed discussion]. The pivotal question would be whether the auditor provided non-audit services could be regarded as a management function. Table 1 below explores this issue.

TABLE 1
TYPES OF IA SERVICES OUTSOURCED AND EXTENT OF INCUMBENT FINANCIAL STATEMENT AUDITOR'S PARTICIPATION

Type of IA service	**Total outsourced**	**Respondents outsourcing some or all IA**	**Respondents outsourcing 100% of IA**
	(n = 30)	(n = 18)	(n = 12)
Information systems review	20 (67%)	11 (55%)	8 (57%)
Regulatory compliance	9 (30%)	9 (100%)	6 (43%)
Operational audits	15 (50%)	5 (33%)	3 (21%)
Inventory management	7 (23%)	5 (71%)	3 (21%)
Risk management	7 (23%)	2 (29%)	2 (14%)
Fraud investigation	3 (10%)	1 (15%)	
New product/business line assessment	3 (10%)		
Loan credit review	3 (10%)		
Site review	1 (3%)		

The data in Table 1 suggest that a considerable portion of IA services performed by the external auditor of the client-firm could be regarded as falling within the ambit of management functions. For example, external auditors perform more than 50% of all outsourced IA activities related to information systems review, compliance work, and inventory management. To the extent that such services encroach management functions, there would be implications for auditor independence. From our study we do not know the specific nature of the categories of IA services provided by the auditor and we urge future research to explore such issues and identify the potential for such services to influence auditor independence.

Results of Hypotheses Tests

Hypothesis 1

The level of environmental uncertainty is higher for firms using low levels of IA outsourcing than for firms using high levels of IA outsourcing.

The Kruskal-Wallis non-parametric test indicates a marginal significant difference in the level of environmental uncertainty between firms that fully outsourced their IA activities and those that partially outsourced and those that did not outsource at all (Chi-square: 5.41; $p < 0.10$). The mean rank in PEU was lowest for firms that fully outsourced and towards the mid and high mean ranks for firms that had not outsourced at all and firms that partially outsourced. Thus, hypothesis one is partially supported in that it appears the level of uncertainty is higher for firms using low levels of IA.

Hypothesis 2

The level of asset specificity of IA activities is higher for firms using low levels of IA outsourcing than for firms using high levels of IA outsourcing

An examination of the level of importance placed on 'the desire to protect information proprietary to the company' as a reason to outsource between those who had fully outsourced and those who had partially outsourced does not indicate any significant difference. Likewise, an examination of the level of importance placed on 'the desire to protect information proprietary to the company' as a reason to in-house between respondents who fully in-housed and those who partially in-housed also did not reveal any significant difference. A crosstabulation of firms that used in-house IA department as a training programme for other positions with the level of IA outsourcing does not indicate any significant difference. Thus, hypothesis 2 is not supported.

Hypothesis 3

The size of the firm is larger for firms use low levels of IA outsourcing than for firms using high levels of IA outsourcing

Based on the Kruskal-Wallis non-parametric test, no significant ($p > 0.10$) difference was found between size and different levels of IA outsourcing. Thus, hypothesis 3 was not supported.

Hypothesis 4

The level of cost pressure will be lower for firms using low level of IA outsourcing than for firms using high levels of outsourcing.

The Kruskal-Wallis non-parametric test indicates no significant ($p > 0.10$) difference in the level of cost pressure between firms with different levels of IA outsourcing. Hence, hypothesis 4 was not supported. This is further supported by the low importance placed on overall cost reduction as a factor in the decision to outsource as well as for the decision to in-house (mean scores were 3.1 and 3.6, respectively and ranked 6th and 7th in importance respectively).[3]

Additional Analyses

Decision to Outsource versus Decision to In-house

In order to understand the extent to which different factors were important for the decision to outsource IA activities, we provided respondents with a list of 13 reasons and used a 7-point Likert scale to determine the degree of importance of each one. A score of 7 meant extremely important, and a score of 1 meant no importance. The 13 reasons ranked in order of importance are provided in Table 2 with their mean and standard deviation. The top two reasons for outsourcing IA services were 'insufficient technological know-how' and 'better quality of service by external provider'. These were closely followed by the 'need to improve organisational performance' and 'IA considered not as a core function' as other relatively important reasons.

Additional analyses were also undertaken to identify any significant difference between firms that completely outsourced IA activities and firms that concurrently used outsourced and in-house IA activities in terms of the degree of importance each factor held in the decision to outsource. The cross-tabulations based on non-parametric tests indicated significant ($p < 0.05$) differences on several factors. It appears that those that fully outsourced perceived the two reasons – IA not being a core function and easier management of environmental uncertainty – to be more important for their decision to outsource than those who adopted a combination of in-house and outsourced IA activities. This finding suggests that a bottom-line driven managerial philosophy may exist within firms that have completely contracted out the IA services.

[3] Interestingly, cost pressure was lowest for those firms that did not utilise any IA at all when compared with those that undertook some type of IA.

TABLE 2
DECISION TO OUTSOURCE

		Mean	SD
1.	Insufficient in-house technological know-how	4.67	1.57
2.	Better quality of service by external provider	4.18	1.69
3.	To improve organizational performance	3.86	2.10
4.	IA not considered as a core function	3.54	1.47
5.	Complexity of internal processes	3.14	1.62
6.	Overall cost reduction	3.10	1.78
7.	Reduction in cost of financial statement audit	2.89	1.48
8.	Staff more receptive to external providers than to in-house internal auditors	2.85	1.49
9.	Desire to protect information proprietary to firm	2.75	1.45
10.	Easier management of environmental uncertainty	2.60	1.43
11.	Transferring risk of in-house internal audit function failure to external provider	2.50	1.67
12.	Access to market information (e.g. customer and competitor developments)	2.29	1.76
13.	Introduction of the goods and services (GST) tax system	2.15	2.03

On the other hand, 'insufficient technological know-how' was seen to be more important by those adopting a combination of in-house and outsourced IA activities than those who solely outsourced ($p < 0.05$). This finding suggests that firms adopting a combination of in-house and outsourced IA activities are probably content with their basic IA facilities, and that the marginal cost of purchasing technological know-how from external sources is more cost effective than developing it in-house.

Listed in Table 3 are the top 10 reasons for the decision to in-house internal audit services and mean and SD for each factor indicating the extent to which each factor was important for the decision to in-house. As expected, the reasons for using in-house IA services appear to be dominated by improvements to goal congruence and enhancement to organizational communication and flexibility provided by internalised services. Interestingly, issues of cost reduction appear to be less important in both the decisions to outsource or to in-house.

TABLE 3
DECISION TO USE IN-HOUSE INTERNAL AUDIT SERVICES

		Mean	SD
1.	There is greater goal congruence between in-house auditors and the organization	5.3	1.98
2.	Improved communication and coordination across different units	5.1	1.68
3.	Increased flexibility and easier access to internal auditor	5.1	1.55
4.	Improved organizational performance	4.9	1.84
5.	Better quality of service by internal provider	4.8	1.92
6.	Difficult to transfer technological know-how to external provider	4.3	1.80
7.	Overall cost reduction	3.6	1.89
8.	Desire to protect information proprietary to firm	3.5	1.72
9.	Easier management of environmental uncertainty	3.1	1.61
10.	Reduction in cost of financial statement audit	2.9	1.75

Further analyses of the degree of importance each factor held in the decision to in-house were also undertaken to identify any significant differences between firms that completely in-housed IA activities and firms that concurrently used outsourced and in-house IA activities. The cross-tabulations based on non-parametric tests indicated no significant differences. This finding suggests that firms that use partial in-house IA services and those that use full in-house facilities are driven or motivated by similar factors.

Perceived Benefits of Outsourcing vs. Perceived Benefits of In-housing

TABLE 4
PERCEIVED BENEFITS OF OUTSOURCING

		Mean	SD
1.	Facilitated the use of experts in specialised areas	4.75	1.32
2.	Improved flexibility	4.30	1.51
3.	Resulted in higher quality service	3.92	1.61
4.	Helped bring in new ideas	3.90	1.40
5.	Made it easier to hold the external provider accountable	3.90	1.75
6.	Helped focus on core competencies	3.71	1.59
7.	Required a high degree of interaction with management	3.51	1.81
8.	Provided feedback and report on auditee (client) exceptions	3.40	1.69
9.	Reduced internal audit costs	2.55	1.62
10.	Increased market opportunities	2.30	1.19

We provided respondents with a list of 10 benefits of outsourcing and used a 7-point scale to determine the extent to which they perceived each one as being beneficial. A score of 7 represented a great deal of benefit, and a score of 1 meant not at all. The 10 reasons ranked in order of perceived benefit are provided in Table 4 with the mean and SD for each factor. The highest perceived benefit of outsourcing was the use of experts in specialised areas, followed by improved flexibility. Four other benefits of outsourcing that hold similar ranking based on the mean values are: higher quality service, help bring in new ideas, made it easier to hold external provider accountable and help focus on core competencies. As expected, there appears to be a close correlation between the perceived benefits of outsourcing and the factors related to the decision to outsource. For example, the leading reason cited for outsourcing IA services is lack of technological know-how, and the perceived benefit derived from outsourcing is the use of experts in specialised areas.

In the case of in-housing IA services, the respondents were provided with a list of 11 benefits of in-housing with a 7-point scale to determine the extent to which they perceived each one as being beneficial. A score of 7 represented a great deal of benefit, and a score of 1 meant not at all. Table 5 lists the 11 reasons – ranked in order of perceived benefit in terms of the mean value for each factor. The highest perceived benefit was that in-housing led to a high degree of interaction with management, followed by improvements in internal processes and helping employees to learn and improve their expertise. The results in Table 3 have some bearing on the benefits of having an in-house IA function. The top five perceived benefits are aligned with the top five reasons for adoting an in-house IA function. This implies that in-house IA are generating the expected benefits.

TABLE 5
PERCEIVED BENEFITS OF IN-HOUSE INTERNAL AUDIT SERVICES

		Mean	**SD**
1.	Required a high degree of interaction with management	5.4	1.19
2.	Helped in improving internal processes	5.3	1.21
3.	Enhanced internal audit and general employee expertise	5.3	1.39
4.	Helped employees learn about internal processes	5.1	1.30
5.	Resulted in higher quality service	5.1	1.31
6.	Provided feedback and report on auditee (client) exceptions	4.9	1.25
7.	Improved flexibility	4.9	1.68
8.	Made it easier to integrate and coordinate different units	4.6	1.60
9.	Called upon internal specialists for advice	4.1	1.68
10.	Reduced internal audit costs	3.4	2.06
11.	Increased market opportunities	2.7	1.61

Interaction between Audit Committees and Type of IA Outsourcing

Audit committees play an important role in corporate governance. Some of the roles undertaken include reviewing internal controls and liasing with the internal audit department to ensure proper communication and coordination exists between management, the internal and the external auditors. It is likely that the greater the complexity of the IA function, the higher the interaction between the audit committee and the auditors. We explore this by examining the number of times per year the audit committee liases with the IA provider. The results suggest, based on the Kruskal-Wallis non-parametric test, that there is a significant difference between the various levels of IA outsourcing and audit committee interactions ($p < 0.05$). More specifically, audit committees seem to liaise more frequently with the IA provider in firms that had fully in-housed IA function than in firms that had fully outsourced their IA function. While this may signal the greater complexity of in-house IA functions, it is also possible that audit committee interaction with external IA providers need to be minimised either due to cost reasons and/or that access to external IA providers is not as flexible and easy as with internal IA providers. Further research is necessary to assess whether such difference in the level of interaction between audit committees and IA provider may affect the audit quality and the effectiveness of audit committees, and why the observed relationship exists.

DISCUSSION

Based on our preliminary data, it can be concluded that the results at best appear to provide some support for the relationship between environmental uncertainty and the level of outsourcing. It appears that as environmental uncertainty increases, firms would prefer to conduct at least some of their IA in-house. In the case of asset specificity, the use of weak measures may limit the interpretability of the results and somewhat explain the lack of support for Widener and Selto's (1999) finding. TCE theory predicts that large firms (which are also likely to use IA frequently) will benefit from the economies of scale enjoyed by internalising the activity. Support for such a hypotheses is not found in this study. Likewise, cost pressure was also found not to be a significant predictor of the level of outsourcing.

Further analyses into the different reasons affecting the level of outsourcing, however, indicates that qualitative factors such as lack of technological know-how, service quality, goal congruence and unit-level communication and coordination issues may play a greater role in the managerial decision. Additional analyses using a pair-wise mean comparison of all respondents who had utilised both outsourced and in-house IA facilities on the

importance they placed on a number of factors in their decision to outsource was also undertaken. Interestingly, the results indicate that the factors relating to overall cost reduction, desire to protect information proprietary to firm, easier management of environmental uncertainty and to improve organisational performance was more important for the decision to in-house IA than for the decision to outsource IA[4]. Such findings provide some support to the TCE argument that in-house facilities will be chosen over contracted-out or outsourced governance structures in situations of high asset specificity and high environmental uncertainty whereby transaction costs can be high.

The present study also highlights the extensive use of the incumbent financial statement auditor as the provider of IA services and that most of these firms also belong to the Big-5. This has implications for professional ethics and for auditor independence. The outcome of the recent debate in the U.S. over the role of external financial statement auditors in providing IA services has led to the SEC ruling that such auditors may provide no more than 40% of services that relate to matters affecting the financial statements. The auditors, however, are allowed to provide 100% of services that are not directly related to financial statement preparation such as operational-type audits. In our study, as shown in Table 2, external financial statement auditors appear to provide more than 40% of services that have a direct impact on financial statements such as inventory management, information systems review and regulatory compliance. Thus, this finding has implications for auditor independence. While Australian firms presently report audit and non-audit fees separately, it is possible that we may need to revisit such reporting requirements in light of the recent SEC rulings. In particular, the SEC requires that *companies receiving information technology services from their incumbent audit company specifically report the amount paid for such services, as well as the total audit and non-audit fees*. Further, the SEC also requires audit committees to look at the relationship between the company and auditor and see whether provision of non-audit services raises concerns. Thus, empirical evidence relating to Australian firms on the extent and type of IA services provided by the incumbent audit firm to its client is an important research issue for addressing potential threats to auditor independence.

The present study provides some support for TCE-related variables in predicting the level of outsourcing of IA activities. It has also highlighted a number of issues relating to auditor independence and corporate governance. Several factors limit the study, including the small sample size representing the different levels of outsourcing, and weak measures of asset specificity. Future studies should seek to improve such measures and also look at alternate theories

[4] Results of 2-tailed t-tests = $t = -1.98$ ($p < 0.10$), $t = -2.41$ ($p < 0.05$), $t = -2.40$ ($p < 0.05$) and $t = -2.24$ ($p < 0.05$), respectively.

or richer explanations of conditions that promote outsourcing of IA. Further research is also needed to determine the implications of IA outsourcing for audit quality and auditor independence.

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