

Reliance of External Auditors on Internal Audit Work: A Corporate Governance Perspective

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Abstract

The literature suggests an increasing need for interactions among board of directors, management, internal audit and external audit as the four components of corporate governance and presents internal audit as a resource for the other components. External auditing standards that originated in the Western world, which are also being applied in developing countries, recommend external auditor's reliance on internal audit to achieve audit efficiency. Nevertheless, whether this efficiency motive explains such reliance in corporate governance settings that differ from the West has not been sufficiently explored as yet. This study examines external auditor reliance on internal audit work using questionnaire survey of 119 external auditors in Ethiopia. Mann-Whitney U test results suggest that external auditors' reliance on internal audit work is not significantly associated with the competitiveness of external audit sub-markets in Ethiopia. Results of multiple discriminant analysis indicate internal audit work performance is the most important factor that determines the extent of external auditors' reliance on internal audit work. Overall, findings suggest that organizations can enhance corporate governance effectiveness by strengthening internal audit and fostering internal-external auditor coordination.

Keywords: External audit, Internal audit, Corporate governance, External audit market, Ethiopia

1. Introduction

Coordination of internal and external audit, has received considerable attention especially over the last decade due to the understanding that robust corporate governance systems help minimize the devastating impact of corporate collapse (Rusak and Johnson, 2007). Recognition of internal audit's role in enhancing financial reporting quality underpins this notion. The Blue Ribbon Committee (1999) report presents audit committees of boards, internal audit and external audit as a three-legged-stool of corporate governance that help ensure reliability of financial reports. The use of financial information by *boards of directors* (on behalf of shareholders) and involvement of *internal and external audit* in enhancing the utility of this information which is provided (and also used) by the *management* (Fan and Wong, 2004; Jensen and Meckling, 1976; Blue Ribbon Committee, 1999) provides an integrated picture of the linkages that exist among the four components of corporate governance. Internal and external audit help enhance audit committee effectiveness by serving as a resource to boards of directors (DeZoort et al. 2002). Internal audit (IA) is a crucial resource in the corporate governance system as it provides services to the other three components of corporate governance (Gramling, et al., 2004; DeZoort et al. 2002). Studies focusing on audit mechanisms as a component of corporate governance in developing countries are relatively limited. Fan and Wong (2004) indicate the corporate governance role of external audit in emerging economies based on empirical evidence from East Asian countries. Nevertheless, the linkages between internal and external audit mechanisms in developing countries and the implication of the linkage for corporate governance in such settings are generally under-researched.

Professional standards on auditing, i.e., International Standards on Auditing (ISA) 610 provide guidelines on external auditors' consideration of IA work in the conduct of financial statement audits. The literature also indicates that external auditors' reliance on internal audit work could produce a significant cost saving through reduction of external audit time. External auditors assess IA work to determine the extent of their reliance on internal audit. Such reliance is also considered as an area where IA adds value through reduced audit fees (Krishnamoorthy, 2001, 2002; Morrill and Morrill, 2003; Mihret 2010; Mihret, James and Mula 2010). Such a cost-saving opportunity arguably engenders interest of the other two components of corporate governance (i.e., boards of directors and management) to promote internal and external audit cooperation.

The intention to reduce external audit costs in a bid to reduce audit fees and maintain competitiveness in the audit service market motivates external auditors' decisions to rely on IA work (Morrill and Morrill, 2003). Besides, internal auditors' closer knowledge of their organizations could provide external auditors with a possibility to reduce audit risk. Thus, testing internal-external audit linkages in diverse settings would yield useful insights of academic and practical value for corporate governance. For instance, in external audit service markets that are highly competitive, external auditors' extent of reliance on internal auditors' work could exceed those in less competitive ones. Prior empirical studies on the relationship of internal and external auditors are predominantly in the context of developed economies. Thus these linkages, their socioeconomic and cultural backgrounds, and the ensuing implications have been largely under-researched in the corporate governance settings of developing countries.

The need for testing applicability of auditing approaches to socioeconomic and cultural settings that differ from the ones in which the approaches originated is recognized (Ritchie and Khorwat, 2007). Haniffa and Cooke (2002) suggest that as environmental factors influence audit practice, the techniques and approaches prescribed for use in the developed economies may not apply to a similar extent in countries with socio-economic settings that differ from the former. The overall corporate governance setting arguably influences the nature of the linkages between audit mechanisms. DeZoort et al. (2002) called for research on audit committee resources, one of which is internal audit, to identify any variations in different cultural and economic settings. This call served as a primary motivation for this study to examine external auditors' consideration of internal audit work in a developing country, Ethiopia. External auditors in Ethiopia possess professional certifications from developed Western countries; thus, auditing standards also mainly relate to those recommended by international certifying bodies.

The paper begins by providing a background about Ethiopia, which is followed by development of the research hypotheses. Section four outlines the research methods in terms of the sample and data collection procedures. The research hypotheses are tested in section five and discussed in section six. Finally, conclusions are drawn in section six.

2. Study Background and Motivation

This study was conducted based on data collected from selected audit firms in Ethiopia, an East African country with an estimated population of 85.6 million (Source: BBC, http://news.bbc.co.uk/2/hi/africa/country_profiles/1072164.stm#facts). Woldegiorgis (1992) indicates that prior to 1991, internal audit in Ethiopia was financial audit focused. Although this financial focus would help internal audit to contribute to external audit, Woldegiorgis's study shows that IA approaches lacked uniformity across organizations and IA's standards of service were rather low. As a result, external auditors' reliance on IA and the cooperation between the two was limited (Woldegiorgis, 1992). Woldegiorgis (1992, p. 29) notes that the limited contribution of IA to external audit was recognized by the then government of Ethiopia as it is quoted from the Council of Ministers' internal audit manual that 'because of the poor performance and absence in some cases of audit departments in public enterprises, the work of external auditors is delayed substantially or in some cases made almost impossible'.

Since 1987, internal audit in Ethiopia seems to have been developing with a substantial government emphasis for this development (Mihret, James & Mula 2009). However, whether or not the several government measures taken to enhance internal audit are reflected in internal-external audit linkages and the recognition of internal audit as a corporate governance resource are not examined as yet. One possible approach to understanding the importance of IA in corporate governance mechanisms is to examine the linkages between internal and external audit.

Ethiopia's corporate governance landscape in general and audit mechanisms in particular are embedded in a setting that differs from a Western context in several ways. The legal basis for external audit emanates from the Commercial Code of Ethiopia (1960) and that for internal audit in state-owned companies emanates from directives issued by the Office of the Auditor General of Ethiopia (Argaw, 1997; Government of Ethiopia, 1987), whereas it is largely voluntary in the private sector. Office of the Federal Auditor General (OFAG) issues practice licenses to auditors in public practice. Having internationally recognized certified or chartered accountancy qualification,

membership to an internationally recognized accountancy body, and four years of experience in external audit are the major requirements to obtain a license to practice as an external auditor in Ethiopia. Ethiopian Professional Association of Accountants and Auditors (EPAAA) is the first professional accountancy body in Ethiopia that was established in 1973. However, this association does not have a legal backing to monitor and regulate the profession. As a result, practitioners are affiliated to Western professional accountancy associations—dominantly the Association of Chartered Certified Accountants (ACCA), UK (Mihret, et al., 2009; World Bank, 2007).

There is no local GAAP in Ethiopia, except that the Commercial Code of Ethiopia serves as a legal foundation for accounting and external audits of business organizations operating in the country. The country's accounting practice is influenced by the practice of other developed countries like the UK (Mihret, James & Mula 2009). Frank (1979) classified financial reporting models of countries worldwide into four groups, and classified Ethiopia in the same category as the UK. However, Frank noted that Ethiopia's practice also shows some similarity with countries that are grouped with the Latin American model. Frank's finding is reasonable as the country did not formally adopt another country's standards nor did it establish national standards. Nonetheless, organizations in some sectors—e.g. commercial banks—are required by government regulation to report in accordance with International Financial Reporting Standards (IFRS). Ethiopia is at present a member of the Eastern, Central and Southern African Federation of Accountants (ECSAFA) (Eastern Central and Southern African Federation of Accountants, 2008), which promotes adoption of IFRS by member countries and works to promote internationally accepted level of competence of its members (World Bank, 2005).

There are two external audit sub-markets in the corporate governance setting of Ethiopia. The first is external audit of state-owned enterprises (SOEs). SOEs are fully government-owned and are governed by board of directors according to proclamation No. 25/1992 (Government of Ethiopia, 1992). Audit Service Corporation (hereafter, ASC), which was established by proclamation No.126/1977 (Government of Ethiopia, 1977), undertakes external audit of SOEs¹. This sector has a substantial prominence in the Ethiopian economy; for example, SOEs held more than 75 percent of the loan portfolios of commercial banks in the country as of July 2007 (World Bank, 2007). The second sub-market comprises private audit firms. There were 65 licensed auditors in Ethiopia as of October 2008 out of which 12 were relatively large and approved by USAID (USAID, 2004). Private audit firms are responsible for the audit of private sector organizations² and obtain clients through competitive bidding, which led to a fierce competition in Ethiopia's private sector audit-sub market (Lemessa, 1996).

Internal audit's relationship with board of directors (or audit committees) is considered to be of fundamental importance to achieve sound corporate governance (Maletta, 1993; Messier and Schneider, 1988). Privatization and Public Enterprises Supervisory Agency (2004) issued a directive that provides guidelines for corporate governance of state-owned companies in Ethiopia. The Agency (2005b) also issued a directive that governs internal audit in SOEs, which requires that all state-owned enterprises establish internal audit departments. The directive requires that internal audit departments report on operational matters to audit committees and administratively to general managers of the respective SOEs. Further, the agency (2005a) also issued another directive that requires SOEs to have audit committees. Nevertheless, while audit committees are established in some SOEs, most SOEs and private companies have no audit committees. Such differences in the corporate governance mechanisms coupled with the overall attributes of the socio-economic setting have implications for the level of linkages among components of corporate governance. Against this background, the present study examines internal-external auditor linkages in Ethiopia to identify the factors associated with such linkages and to draw implications for enhancing efficiency of corporate governance in developing countries.

3. Hypothesis Development

The literature indicates that internal and external auditor linkages by way of the latter's reliance of the former's work is beneficial to organizations (Al-Twaijry, et al., 2004; Felix, et al., 2001) and thus boards of directors and management are likely to encourage such linkages. Felix et al. find the contribution of internal auditors to financial statement audit as a significant external audit fee determinant. Reduction in audit fees results from external auditors' reliance on internal audit work (Morrill and Morrill 2003), which also implies cost saving possibility for the organisations audited (Sprakman, 1997). Thus, internal audit enables organizations achieve cost saving intentions. A dimension of this cost saving role is external audit fee reduction, which could be a substantial benefit to external auditors and their clients (Morrill and Morrill, 2003; Sprakman, 1997).

Therefore, it follows that both auditors and their clients have an incentive to seek greater extent of external auditors' reliance on internal audit work. The extent of this reliance is associated with several factors, of which Brown (1983) identified independence and work performance of internal auditors as the most important. Similarly, Abdel-Khalik, Snowball and Wragge (1983) reported independence of internal auditors as the most important factor that

determines reliance of external auditors on internal audit work. Schneider (1984)), on the other hand, identifies work performance as the most important factor followed by objectivity. Schneider attributes this slight difference from the results of earlier research to research design features, i.e., the differences in the items included under each factor used in data collection instruments. A further variation in empirical results is Schneider's (1985) study which reveals that external auditors consider competence and work performance as equally important for reliance decisions, but finds objectivity as less significant. Similarly, Haron et al. (2004) documented internal audit's competence and scope of work were the factors that external auditors consider in making reliance decision. On the other hand, Margheim (1986) indicates objectivity as a significant variable in the reliance decision and attributes the differing findings—i.e., in view of those of earlier studies—partly to the possibility of contextual factors influencing external auditors' judgments.

Another factor that influences reliance decisions is the level of inherent risk that an audit client entails (Carey, et al., 2006; Felix, et al., 2001). For high-risk clients, external auditors' use of internal audit work may reduce inherent risk because internal auditors possess a greater awareness of client operations than external auditors (Carey, et al., 2006). Internal auditors also possess superior authority of access to organizational information than external auditors (Spraaakman, 1997). The reduction in the external audit effort as a result of the reduced risk may, in turn, enable external auditors to reduce fees.

Finally, internal audit effectiveness as measured by management's acceptance and implementation of internal audit findings and recommendations may impact on external auditors' reliance on internal audit work. As the extent of internal audit effectiveness exhibits variation across organizations (Mihret and Woldeyohannis, 2008; Mihret and Yismaw, 2007; Roth, 2000), the level of external auditors' reliance on internal audit work may also vary accordingly. Consequently, higher levels of acceptance of internal audit recommendations by the management may lead to higher levels of external auditor reliance than a situation where internal audit is less effective.

The variations in empirical research results on factors that determine external auditors' reliance on internal audit may raise interest to explore associations between these factors and audit market characteristics. Differences may be observed in the level of external auditors' reliance on internal audit work among external audit markets when different levels of competition for clients prevail in external audit markets. Specifically, we argue that external auditors' level of reliance on internal audit work varies depending on the level of competition in the external audit service market. As a result of government involvement in economic activity through SOEs, attributes of the corporate governance setting and characteristics of the audit market in Ethiopia differ from the dominant settings in the literature. For example the Ethiopian setting comprises two external audit sub-markets, each with different degrees of competitiveness. The first is external audit of SOEs. The Audit Service Corporation (ASC) is mandated to conduct external audit of SOEs by proclamation No. 126/1979. The second sub-market is that of private sector businesses where private audit firms compete for clients. The impact of such external audit market structure in Ethiopia (and possibly other developing countries) on the reliance of external auditors on internal audit work has not been empirically examined as yet.

In line with the foregoing arguments, it is logical to expect that the extent of external auditors' reliance on internal audit work differs between the two sub-markets in Ethiopia. That is, private audit firms, operating in a corporate governance environment characterized by competitive external audit market, could opt to rely on internal audit to a greater degree than the ASC which is granted clients by proclamation. This leads us to the first research hypothesis:

H₁. The extent of external auditors' reliance on internal audit work by Ethiopian private audit firms exceeds that of the Audit Service Corporation.

The best strategy to empirically test this hypothesis is to examine external auditor's views about their level of reliance on internal audit work. Therefore, the hypothesis requires an assumption that *differences in perceptions of external auditors about internal audit in the two external audit sub-markets are random*. That is, validity of the conclusions to be drawn from the test of *H₁* hinges upon the assumption that perception of external auditors on internal audit practice does not vary systematically between the two groups of auditors. To establish validity of this assumption, we test the second hypothesis:

H₂. External auditors' perceptions of internal audit practices in Ethiopian state-owned enterprises do not differ from external auditors' perceptions of internal audit practices in Ethiopian private companies.

Consistent with our argument about the possible variations in the extent of external auditors' reliance on internal audit work by setting, the factors that influence the level of reliance also tend to exhibit variations by empirical context (Margheim, 1986). As most of the literature on this topic is based on the developed world, studies on developing countries may contribute additional evidence and/or new insights into the literature. One such evidence is that of Al-Twajiry et al. (2004) on Saudi Arabia, which indicates that the extent of external auditors' reliance on internal audit work was associated with external auditors' perceptions of internal audit's objectivity, competence and work

experience. Further empirical examination of these factors in new settings like Ethiopia may enhance our understanding of the concepts especially from the perspective of developing countries. Consequently, in line with Morrill and Morrill (2003), we test the following hypothesis:

H₃. External auditors' level of reliance on internal audit work in Ethiopia is associated with their perceptions of internal audit practice of clients.

4. Methodology

4.1 The sample

A questionnaire survey of external auditors' opinions in two sub-markets, i.e. ASC and private audit firms, was conducted to obtain the data for the study. The study is an analytical survey, which aims to explain relationships between variables rather than describe a population. Thus, representativeness of the sample to the population was not the target of the study; attempt was instead made to ensure validity of the data by applying purposive sampling (Oppenheim, 1992). This approach enabled capturing opinions of auditors with the experience in auditing clients that maintain an internal audit function. Subject to this criterion, we aimed to obtain approximately equal number of responses from the two groups of auditors.

There were a total of 65 private audit firms in Ethiopia, registered by the Federal Office of Auditor general. As most of these are small firms that were unlikely to have large clients with internal audit units, we considered twelve³ firms approved by USAID (USAID, 2004). Contact persons were identified in these firms and it was established that six of these audit firms had clients that maintain internal audit. Potential respondents were then identified through the contact persons in both sub-markets to ensure that external auditors with experience in clients having internal audit departments would be included in the study. Two hundred-fifty survey questionnaires, i.e. 125 each to the two sub-markets, were distributed. One hundred twenty-six responses were obtained in total, out of which 119—sixty-one from the ASC and fifty-eight from the private audit firms—were usable. This yields an overall response rate of 47.6 per cent. Since the research model consisted of five independent variables (explained in next subsection), the usable sample is expected to achieve a statistical power of 80 per cent with alpha level of 0.05 to identify a medium effect size (Hair et al. 1998).

4.2 Variables

External auditors' level of reliance on internal audit work is considered as a dependent variable in the study. The independent variables were internal auditor independence and objectivity (INDOB), internal auditor competence (COMPE), internal auditor work performance (WORKP), internal audit effectiveness (AUDITE), and the level of client's inherent risk (AUDITR). The dependent variables were measured at ordinal level and the independent variables were measured using 5-point Likert-type scale. This scale is chosen so that the resulting data is amenable to statistical analyses in testing the research hypotheses (Bohrstedt and Knoke, 1994; Hair Jr., et al., 2006).

4.3 Data Collection Instruments

The questionnaire was pilot tested with 15 respondents, i.e., 7 auditors from the private audit firms and 8 from the ASC. Some revision was made to the questionnaire based on the comments of the respondents. The questionnaire contained a cover letter and a one-page brochure to clarify researchers' expectations. The clarification was made to enhance validity of the data (Fowler, 2002) as it was learned from the pilot study that there were variations in the titles used to refer to the internal audit functions in different organizations in Ethiopia, and that there were clients having no internal audit function. It was indicated in the brochure that responses were sought with regard to those audit clients that had internal audit functions—matching with the Institute of Internal Auditors' (IIA) definition of internal audit, whatever title is used to refer to it. The IIA's (2004) definition of internal audit was also included in the brochure.

A 5-point Likert-type scale was used to measure external auditors' attitudes as these variables are constructs. Descriptors and corresponding numerical codes: 'Strongly Agree' [5], 'Agree' [4], 'Neutral' [3], 'Disagree' [2], and 'Strongly Disagree' [1] were provided as response options. In such a measure, it is necessary to clearly indicate the attitude object, about which opinions are sought (Bradburn, et al., 2004). Therefore, we clearly stated in the instructions that the respondents were expected to provide opinions on the statements as applied to their clients that maintain internal audit departments. The use of anchor terms from 'Strongly Agree' to 'Strongly Disagree' provides a better measure of attitude of respondents about such constructs than the use of terms that indicate frequency of occurrence (Kwok and Sharp, 1998).

Theoretically, interval scales in general and attitude scales in particular are ordinal in nature as intervals between successive values in the scale may not be equal. However, in practice, equal interval is assumed because if there are two or more correlated items to measure a variable, equality of the intervals could be assumed (Kerlinger and Lee, 2000). Furthermore, Likert-type scale has been used in prior auditing research (e.g. Flesher and Zanzig, 2000; Kalbers

and Cenker, 2007; Kalbers and Fogarty, 1995) that involved measurement of constructs. Likert-type scale also helps enhance measurement reliability as item responses under each construct could be summated, thereby reducing measurement error because errors will cancel out (Brownell, 1995).

The body of the questionnaire contained seven sections. The first section consisted of a question on the level of external auditors' reliance on internal audit work and offers four response options: 'No Reliance' [0], 'A Little Reliance' [1], 'Moderate Reliance' [2], and 'High Reliance' [3]. The use of a nominal measure makes this item similar to the item used in Felix et al. (2001) to measure the extent of internal auditors' assistance to external auditors. However, Felix et al.'s (2000) question sought dichotomous responses, with options 'extensive/moderate' and 'limited/none'. In the present study, four options were provided to offer more alternatives to respondents. Sections two through six of the questionnaire consisted of Lickert-type items with five point scale responses options as described above. All items were positively stated concepts used as indicators of the variables. Specifically, section two consisted of six items on INDOB (INDOB1 through 6); section three contained five items on COMPE (COMPE1 to 5); section four consisted of ten items on WORKP (WORKP1 through 10); section five contained three items on internal audit effectiveness AUDITE (AUDITE1 through 3); and section six contained three items on INHERI (INHERI1 to 3). Section seven was aimed at generating biographical data about respondents.

To ensure validity of measurement, items in the questionnaire were largely adopted from prior research (Bradburn, et al., 2004). As having a large number of items under a construct enhances reliability of measurement (Churchill Jr, 1979; Kwok and Sharp, 1998) multiple items were used to measure each construct to the extent the literature warrants. Kwok and Sharp recommend at least three items under each scale, which was used as a general guide for this study.

5. Results

5.1 Biographical Data

A total of 119 questionnaire responses were analyzed. Sixty-one respondents were ASC employees and 58 were from private audit firms. The respondents had mean work experience of 11.23 years, with a median of 8 years. Individual experiences ranged from 1 year to 35 years. Approximately 29 per cent of the respondents were audit managers; 48 per cent were senior auditors; and 18 per cent were auditors and junior auditors, and the rest did not reply to the job title question. Approximately 29 per cent of the respondents were certified public accountants⁵, and about 13 per cent were in progress for certification⁶.

5.2 Reliability Analyses

Reliability test is performed to ensure that only items that measure the same concept as the other items under a dimension were included. The reliability of the entire scale under each dimension was measured using Cronbach's alpha. Cronbach's alpha of 0.60 was used as a threshold to decide whether or not to include an item into a scale (Hair et al. 1998). Items, the deletion of which could improve overall Cronbach's alpha were excluded from the scale. All factors had Cronbach's alpha of greater than 0.60 as items that were possibly inconsistent were deleted. Item INDOB3, WORKP6, and INHERI3 were excluded from the scale. Before excluding items with low reliability, the minimum overall alpha was 0.623 for INDOB and the highest was 0.893 for WORKP. After inconsistent items were excluded, the lowest alpha increased to 0.711 for COMPE and the highest showed a slight improvement to 0.894 for WORKP. Overall, Cronbach's alpha was considered large enough to take the data as reliable.

As an additional tool for assessment of reliability, inter-item correlations were computed for each dimension. Inter-item correlation of 0.30 is considered acceptable (Hair et al. 1998); these correlations were mostly positive and above this minimum threshold. INDOB3 and INDOB5 had negative inter-item correlation, which further justifies the aptness of excluding the former from the scale. All the other items with inter-item correlation of less than 0.30 had inter-item correlation above this threshold with at least one other item. Following the reliability analyses, summative scales i.e., composite variables, were derived to reduce the data by collapsing items under each factor into a scale. This procedure helped enhance model parsimony for subsequent analysis and improve measurement reliability by minimizing measurement errors (Hair Jr., et al., 1998).

5.3 Test of Hypotheses

H₁. The extent of external auditors' reliance on internal audit work by Ethiopian private audit firms exceeds that of the Audit Service Corporation.

Mann-Whitney U was employed to test this research hypothesis because audit firm type is categorical data measured nominally, and the level of reliance was measured using an ordinal scale. Although private audit firms exhibit slightly higher reliance on internal audit work than ASC auditors, which is shown by the higher mean rank of 61.95 for the private audit firms compared to 58.15 for the ASC (Table 1), this difference is not statistically significant at 0.05 level

of confidence. Therefore, the data does not support the first research hypothesis that the level of reliance of private firm auditors on internal audit exceeds that of ASC auditors.

H₂. External auditors' perceptions of internal audit practices in Ethiopian state-owned enterprises do not differ from external auditors' perceptions of internal audit practices in Ethiopian private companies.

To test the second hypothesis, multivariate analysis of variance (MANOVA) was performed. MANOVA is chosen because the independent variable, audit firm category, is dichotomous and the dependent variables represent interval data. Questionnaire responses converted into scales were tested for appropriateness for MANOVA. Leven's test for equality of variances shows that the variances were homogeneous across the groups; thus the assumption of homogeneity of variances is met ($p > .05$) (Table 2). Multivariate test of significance was conducted using Wilk's lambda, Pillai's criterion, Hotelling's trace and Roy's greatest characteristic root. Results summarized on Table 2 (b) indicate that there were no statistically significant differences between ASC auditors' and private firm auditors' perceptions of internal audit practice ($p > 0.05$ for employment category). Thus, validity of the results of the first hypothesis is confirmed.

H₃. External auditors' level of reliance on internal audit work in Ethiopia is associated with their perceptions of internal audit practice of clients.

To identify factors that determine external auditors' extent of reliance on internal audit work, multiple discriminant analysis (MDA) was conducted by way of testing the third hypothesis. MDA enables testing this hypothesis because the hypothesis involves one dependent variable, i.e., extent of external auditor's reliance on internal audit work, and five independent variables, i.e. COMPE, INDOB, WORKP and INHERI. In addition, the variables, especially COMPE, INDOB, and WORKP are interrelated, and the relationships among variables that determine external auditor judgment are considered linear (Brown, 1983).

There were only two respondents in the 'High Reliance' category, which indicates that the minimum practical requirement (of 20 cases in a group) for using MDA was not met. Therefore, we combined moderate and high reliance categories. Consequently, the three categories, i.e. No Reliance, A Little Reliance, Moderate and High Reliance had 26, 54, and 39 cases respectively. Thus the assumption that the smallest group size (i.e., 26 in this case) should exceed the number of independent variables (i.e., 5 in this case) is also met. Equality of covariance metrics is also tested using Box's M, which indicates that the covariance metrics for the three groups—i.e., No Reliance, A Little Reliance, and Moderate and High Reliance—were equal (Box's $M = 0.251$, $p > 0.05$) (See Table 3 [b]). All the MDA results are displayed on Table 3.

A stepwise computation was used to clearly identify the variables with the highest discriminatory power. As shown on Table 3(c), there was only one step in the process of model estimation, and WORKP was the only variable that entered into the model. The model is statistically significant (Lambda = 0.816, $p < .05$). This implies that WORKP has a statistically significant discriminatory power, but the rest of the independent variables did not have statistically significant discriminatory power. The MDA model generated is expected to achieve a hit ratio of 46.2 per cent, i.e., it can correctly classify 46.2 per cent of the cases into the three categories (Table 3(d)).

6. Discussion

This study has attempted to examine the linkages among corporate governance components by taking the case of external auditors' reliance on internal audit work in a developing country's setting of Ethiopia. It aimed to determine the level of external auditors' reliance on internal audit work and identify key factors that determine the extent of this reliance. Our choice of empirical setting of Ethiopia emanates from three sources. First, Ethiopia has an audit infrastructure that comprises two sub-markets, which enables a comparative study of audit sub-markets based on the level of audit market competitiveness. Second, the legal framework, in which external and internal audit operate in Ethiopia, differs from what has been addressed in the hitherto dominant literature. Third, in developing countries like Ethiopia where there are no local certifications of practicing auditors external audit knowhow is largely 'imported' (Mihret, James & Mula 2009). Therefore, examining how the professional auditing standards recommended by international accountancy bodies are implemented in environments without national standards enables a more complete understanding of issues related to implementation of auditing standards globally. Increasing globalization of auditing and corporate governance necessitates understanding of the issues in developing countries like Ethiopia. The results of this study suggest that there were no statistically significant differences in the extent of reliance of external auditors on internal audit work between private audit firms and the Audit Service Corporation; i.e., contrary to our expectation, the first hypothesis is not supported. There are two potential explanations for this lack of support. First, this is possibly because the extent of competition in the external audit service market for private audit firms is not highly dependent on external audit efficiency. Secondly, the scope of internal audit services in Ethiopia may be dominantly operational audit rather than financial audit. In addition, if

internal audit is focused on providing consulting services to management, this may lead external auditors to question independence of internal audit (Brody and Lowe, 2000; Plumlee, 1985). Ahlawat and Lowe (2004) indicate that consulting services could influence internal auditors' objectivity. That is, where internal auditors focus on providing consulting services to management, their objectivity may be compromised. This may provide external auditors with little incentive to rely on internal audit work in financial statement audits and create limited opportunity for external auditors to assess the complete set of activities that internal auditors perform.

The second research hypothesis is supported, which implies that the assumption that underlies the first research hypothesis is valid. Although test of H_1 indicates no difference between the perceptions of ASC auditors and private firm auditors, validity of the results is established.

The third hypothesis is also supported. Thus, the result indicates that the major concern of external auditors regarding internal audit practice was work performance of the internal auditors. The ten items in the WORKP dimension focused on scope of internal audit work, frequency of internal audit, presence of internal audit manuals, preparation and effective use of audit programs, satisfactory documentation of audit working papers, review of internal audit work and quality of internal audit reports, perceived compliance of internal audit with Institute of Internal Auditors' (IIA) Standards for the Professional Practice of Internal Auditing, and presence of external assessment and ongoing monitoring. This result is consistent with that of Schneider (1984) which indicates that work performance is the most important factor for external auditors' reliance decisions. In Schneider's (1984) study, however, perceived objectivity of internal auditors was the next significant factor; while the effect of this factor is not statistically significant in the present study.

7. Conclusion

This study has examined external auditors' reliance on internal audit work based on the empirical setting of Ethiopia. First, it explored whether auditors in more competitive external audit markets rely on internal audit work to a greater extent than their counterparts in less competitive markets. Second, the paper attempted to identify factors that are associated with the extent of external auditors' reliance on internal audit work. Questionnaires were distributed to two groups of external auditors in Ethiopia: those working in a corporate governance environment of private companies and those in state-owned enterprises' corporate governance setting. Mann-Whitney U test results show that there were no significant differences in external auditors' extent of reliance on internal audit work in the two settings. This result suggests that internal-external audit interactions in Ethiopia, and possibly other developing countries, may not be driven by external audit efficiency motives. Multiple discriminant analysis results suggest that external auditors' perceptions of internal auditors' work performance are significantly associated with external auditors' level of reliance on internal audit work. This suggests that strengthening IA could help improve internal-external audit linkages and hence enhance effectiveness of corporate governance.

The results of this study are expected to offer practical and theoretical contribution. First, the results illuminate external auditors' perception of internal audit practice in Ethiopia. This may inform boards of directors and management of organizations in the assessment of internal audit department performance. The results also provide insights to internal auditors in other countries with similar contexts as Ethiopia. Second, external auditors may have a general view of internal audit practice in Ethiopia to supplement their own understanding in forming audit judgements. Third, international professional accountancy bodies whose members are practicing in developing countries might gain an understanding that the application of external auditing standards is dependent upon the economic and institutional settings in which external auditors operate.

Potential limitations inherent in the sampling technique employed should be acknowledged. That is, purposive sampling was used in selection of respondents. As the existence of internal audit in clients is a prerequisite for respondent selection, audit firms servicing clients with internal audit departments were included in the sample. This may limit the generalizability of the conclusions to a population. Nonetheless, this will have little impact on the validity of the results as the study is mainly an analytical survey aiming to identify relationships among variables rather than describe the population statistically (Oppenheim, 1992). Further research could be done to examine the interactions of IA with the other two components of corporate governance (i.e., management and boards of directors) and the impact of this interaction on the internal-external audit linkages in developing countries. A replication of this study in other countries could also help to confirm or extend the conclusions.

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Notes

Note 1. There were 115 state-owned companies as of October 2008.

Note 2. The World Bank report (2007) indicates that as of July 2007, there were 4943 private companies in Ethiopia, most of these being small companies that are not required by law to be audited.

Note 3. Getachew Kassaye & Company, A.W. Thomas & Company, A.A. Bromhead & Company, Degefa Lemessa & Company, HST Chartered Certified Accountants, and Tadesse Woldegabriel & Company.

Note 4. Bradburn et al. (2003) explain that attitude and opinion are clearly. However they consider opinion as measurable on a single item and attitudes as a set of opinions. Similarly, Dornyei (2003) share the opinion that the two are not clearly distinguishable and point out that attitudes opinions are more factual.

Note 5. All the certified accountants were affiliated with the Association of Chartered Certified Accountants (ACCA), UK. Four of these respondents were also Certified Internal Auditors (CIAs), members of the Institute of Internal Auditors (IIA).

Note 6. All the certified accountants were affiliated with the Association of Chartered Certified Accountants (ACCA), UK. Four of these respondents were also Certified Internal Auditors (CIAs), members of the Institute of Internal Auditors.

Table 1(a). Mann-Whitney U test: Ranks

Type	Firm	N	Mean	Sum of
			Rank	Ranks
Reliance	ASC	61	58.15	3547.00
	Private	58	61.95	3593.00
	Total	119		

Table 1(b). Mann-Whitney U test: Test Statistics^a

Reliance	
Mann-Whitney U	1656.000
Wilcoxon W	3547.000
Z	-.647
Asymp. Sig. (2-tailed)	.517

a. Grouping Variable: Audit firm category

Table 2 (a). MANOVA Results: Levene's Test of Equality of Error Variances^a

	F	df1	df2	Sig.
INDOB	3.853	1	82	.053
COMPE	3.853	1	82	.053
WORKP	2.025	1	82	.159
AUDITE	.242	1	82	.624
INHERI	.071	1	82	.790

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept + Epml

Table 2 (a). MANOVA Results: (b) multivariate Tests^b

Effect		Value	F	Sig.
Intercept	Pillai's Trace	.952	390.544(a)	.000
	Wilks' Lambda	.048	390.544(a)	.000
	Hotelling's Trace	19.774	390.544(a)	.000
	Roy's Largest Root	19.774	390.544(a)	.000
Epml	Pillai's Trace	.079	1.691(a)	.160
	Wilks' Lambda	.921	1.691(a)	.160
	Hotelling's Trace	.086	1.691(a)	.160
	Roy's Largest Root	.086	1.691(a)	.160

a Exact statistic b Design: Intercept+Epml

Table 3 (a). Discriminant Analysis Results: Tests of Equality of Group Means

Box's M	1.250
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Tests null hypothesis of equal population covariance matrices.

Table 3 (b). Discriminant Analysis Results: stepwise statistics: Variables Entered/Removed^{a, b, c, d}

Step	Entered	Wilks' Lambda				Exact F			Sig.	Tolerance	F to Remove
		Statistic	df1	df2	df3	Statistic	df1	df2			
1	WORKP	.761	1	2	81.00	12.701	2	81.00	.000	1.000	12.701

At each step, the variable that minimizes the overall Wilks' Lambda is entered.

- a. Maximum number of steps is 10.
- b. Minimum partial F to enter is 3.84.
- c. Maximum partial F to remove is 2.71.
- d. F level, tolerance, or VIN insufficient for further computation.

Table 3 (c). Discriminant Analysis Results: summary of Canonical discriminant function: Standardized Canonical Discriminant Function Coefficients

Structure Matrix

Variable	Function
	1
WORKP	1.000
INDOB(a)	.600
COMPE(a)	.600
AUDITE(a)	.445
INHERI(a)	.234

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions

Variables ordered by absolute size of correlation within function.

a variable(s) not used in the analysis.

Table 3 (d). Discriminant Analysis Results: Classification Results ^a

Level of Reliance	Predicted Group Membership			Total	Hit ratio (%)
	No reliance	A little reliance	Moderate and high reliance		
No reliance	14	8	4	26	34.6
A Little reliance	17	19	18	54	46.3
Moderate and High reliance	7	10	22	39	31.8
Predicted group size	38	37	44	119	46.2a

^a46.2 per cent of original grouped cases correctly classified. $[(14+19+22)/119] \times 100$