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# Perceived auditor independence factors in Uganda

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## Abstract

**Purpose** – The purpose of this paper is two-fold: the first is to establish whether, in the face of the company-pay model, financial statement preparers perceive threat and enhancing factors of Auditor Independence (AI) the same way as users and external auditors, then secondly to model AI factors in Uganda.

**Design/methodology/approach** – A two-methods approach is used which comprises, use of a one-way ANOVA where the independent variable (AI factors) is measured using different participants or groups (preparers, auditors and users) to examine the differences in opinions between the groups, and confirmatory factor analysis technique of structural equation modelling to achieve the two-fold objective. We use a self-administered survey questionnaire to accountants in Uganda involved with entities' financial statements as preparers, external auditors or users to collect data.

**Findings** – There are significant differences in opinions of the preparers and the other stakeholders (users and auditors) regarding non-rotation of audit firm, staff and partners and, board control of appointment and remuneration of auditors; as AI undermining factors. The preparers opine that failure to rotate auditors and the control of auditor appointment and remuneration by the board is more AI constraining, relative to the opinions of both the auditor and user regarding these factors. Financial statement preparers were more concerned than auditors and users that failure to rotate auditors and the control of auditor appointment and remuneration by the board impairs AI. A six-dimensional model of AI undermining factors was fitted and a five-dimensional model best fitted for AI enhancing factors.

**Practical implications** – The paper provides two models that can be used by accountancy bodies or other stakeholders as a starting point in improving/or evaluating AI in developing countries.

**Originality/value** – This study is representative of key parties on the demand and supply sides of the audit services market, auditors, financial report preparers and financial report users. It thus extends the frontiers of knowledge on critical factors affecting AI in a developing country context and has implications for theory, policy and practice.

**Keywords:** Auditor Independence factors, users, preparers, financial statements, developing country.

**Paper type** - Research paper

## 1. Introduction and motivation

In this paper we examine differences in opinions of financial statements preparers, external auditors and users regarding factors affecting AI in Uganda. We also develop two models for AI factors in Uganda. AI is variously defined, but Gay and Simnett (2003) regard it as “ability to withstand pressure from management influence when conducting an audit or providing audit-related services, so that the professional integrity of the auditor is not compromised” (p. 745). Many regard the audit profession as anchored on AI (e.g., Caswell and Allen 2001) as its implications cut across preparers of financial statements (company managers), external auditors and other users of those financial statements. AI is regarded as a fundamental principle underlying auditor work (Firth, 1980) and critical in protecting interests of creditors and shareholders (Moore et al., 2006). However, conflict



situations such as auditors being hired and paid by companies they audit (Mautz and Sharaf, 1961) can diminish AI. Therefore, given its importance and, following financial reporting scandals and collapse of one of the then Big N family accounting firm Arthur Andersen (Alleyne et al, 2006); AI now requires varied safeguards to protect (Institute of Management Accountants, 2011) as well as measures to enhance it than before.

Extant studies document a wide variety of safeguards to protect or enhance auditor independence.

In Uganda for example, Warabyeki (2008) suggests auditor independence enhancing factors as: auditor engagement controls (auditor-client relationship controls, audit process controls, audit fee controls, audit service controls; internal governance measures (appointment of auditors and audit committees, ethics codes in the client company and favourable internal client firm's policies ensuring fair financial reporting), and oversight of auditors (use of international standards on auditing, effective disciplinary procedures by the Institute of Certified Public Accountants of Uganda (ICPAU) and compliance with international financial reporting standards).

In the United Kingdom (U.K) Beattie et al (1999) indicate that the most important AI safeguards are the existence of an audit committee, the risk of referral to a review panel, and the risk to the audit firm of loss in status as a registered auditor. Beattie et al (1999) elicited U.K. interested parties' perceptions of the influence on AI of a large set of 45 economic and regulatory factors using a questionnaire instrument. These authors found factors having a significant impact on independence perceptions for all groups (finance directors, audit partners, and financial journalists) as threat factors relating to economic dependence and non-audit service provision, while the principal enhancement factors related to regulatory changes. Following from this seminal work, scholars (Wines, 2011; Irmawan, Hudaib & Haniffa, 2013) have investigated shared meaning of AI, perceptions of auditors and users of their reports, respectively. Others: Hemraj (2003) examined utility of independence in preventing audit failure; Law (2008) compared non-Big 4 and Big 4 auditors' perceptions of AI; Zerni (2012) examined the question of whether client firms manage the perception of AI; Mostafa, Magda, and Habib (2013) examined the relationship between independence, audit quality and mandatory auditor rotation; Clout, Chapple and Gandhi (2013) examined AI regulations on established and emerging firms. Of the recent, Tepalagul and Ling lin (2015); Dharmaraj et. al (2017) and Salawu (2017) while examining the phenomenon of AI in a review of related literature across the globe; in Malaysia and in Nigeria all call for the more research on AI to enable a full understanding of its manifests and impact on financial reporting quality.

Debate also still supervenes regarding the utility of enhancing factors and also the potential for threat factors to actually threaten AI. For example, some authors suggest that provision of non-audit services should be prohibited (e.g. Alleyne et al., 2006; Gul et al., 2007) while some (e.g., Kinney et al., 2004) argue that provision of non-audit services would positively enhance independence, yet others (e.g., Quick & Rasmussen, 2005) find no influence on the perceptions of independence. The theoretical rationale for impairment of AI presented by DeAngelo (1981) indicating that the existence of future quasi rents weakens auditors' incentives to be independent is also not without opponents (e.g., Simunic, 1984; Beck et al., 1988; Arrunada, 1999; Beattie and Fearnley, 2002). Moreover, meta-analytical studies by Pomeroy and Thornton (2008) and Habib (2009) also substantiate inconclusive or inconsistent evidence on the relation between non-audit fees and the quality of financial reporting or auditing.

We argue that given the apparent ambivalence in literature, AI might be context specific and

in this paper we examine the factors affecting AI in Uganda eliciting opinions of preparers of financial statements, auditors and users. In economies with high levels of unemployment/underemployment and lack of financial depth, the perception of AI can be different. For example, Nkundabanyanga et al (2013) find legal framework significantly associated with quality of financial reporting. Since different contexts ascribe to different legal regimes, AI could be affected differently. The same argument for environments at lower levels of accounting development and also with stock market development relatively incipient (e.g., Uganda) is advanced in this paper. These arguments suggest a need for context-specific models of AI factors. Also contrary to previous research, we elicit the views of preparers aware that the principle responsibility of financial statements lies with the preparers who in this case are the directors through the company management. In doing this we establish whether even in the face of the company-pay model, such a group perceives threat and enhancing factors of AI the same way as their counterparts. Furthermore, Small and Medium Companies in Uganda use audited accounts to seek for bank credit. Banks may not offer credit to a company whose accounts are qualified; and this may make an incipient and fragile company fail to survive (Hemraj, 2003). In such a setting, the audit service (that may lead to qualified accounts) may not be perceived as serving the public interest. Also, most companies in Uganda are not listed and so qualified audit opinions may not receive the reaction one would expect of a listed firm, and there are other sources of survival, for example, political patronage. Therefore, while the ethical principle demands that the auditor should not subordinate his judgment to the judgment of the client from the desire to make a client happy (Hemraj, 2003), the way AI is perceived in Uganda might be different. This study sought to examine this possibility; whether previously established threat and AI enhancing factors in other settings are perceived the same way in Uganda.

This study is therefore motivated and makes important contributions in a number of ways. First, by enlisting the views of the preparers of financial statements which the auditors audit, we assess enhancing and constraining factors of AI in a more direct manner. Borrowing the words of Knechel et al (2013) that AI perception “can depend very much on whose eyes you look through” (p. 386); this study “looks through the eyes” of financial statement preparers, in addition to auditors and users. Besides Knechel et al. (2013) requested for further investigation of audit quality inhibiting factors by enlisting the views of a wide range of stakeholders concerning audit quality. Second, our study is representative of key parties on the demand and supply sides of the audit services market - auditors, financial report preparers and financial report users (see Wines, 2011). Prior research has largely ignored this issue. Beattie et al. (1999) considered preparers as auditors and finance directors. Our study assumes that the two groups are not homogeneous; auditors are not preparers of financial statements. Alleyne et al (2006) – the notable study on AI in a developing country context, i.e. Barbados -investigated differences in perception of AI factors using two groups, users and auditors. A similar study in Bahrain by Al-Ajmi and Saudagaran (2011) also used two groups, auditors and financial statement users. We add a third group in this study, preparers. Third, while other researchers (e.g., Alleyne et al, 2006) used one theoretical exposition, we use two theoretical lenses i.e. agency and role conflict theories to examine AI to address the calls for multi-theory approaches (e.g., Neville, 2011). Forth, Wines (2011) using experimental study, was concerned with shared meaning of AI between the sides using the measurement of meaning framework originally developed by Osgood et al (1957); ours is to add on earlier research that has examined perceptions of AI in different contexts. By developing models for AI factors in Uganda, we continue to advance the view that perceived AI is context specific.

We proceed in the remainder of this paper as follows. The next section briefly describes the audit environment in Uganda. This particular section aims at identifying unique characteristics that would

augment different AI complexion. Section 3 is literature review. This section briefly reviews agency and role conflict theories and this is aimed at setting a relevant framework for understanding AI. Following from this review we state our 1st hypothesis relating to the test of differences in opinions of three groups as regards AI factors. We also briefly review empirical studies on factors that affect AI in this section in order to set our 2nd and third hypotheses relating to two models that we develop in this paper. In section 4 we show the methodology followed in undertaking the study. In section 5 we present and discuss the results. Finally in section 6, we make a conclusion, derive implications and suggest further research areas.

## **2. The Audit Environment in Uganda**

Uganda is a medium-sized country in East Africa and until 1962 was a British protectorate. The current population is estimated at about 34.5 million people. The country's recent history is characterized by civil wars and political unrest, with wide-ranging effects on governance and human capital (Nkundabanyanga, et al., 2014) and constrained development of the economy and lack of robust civil structures including the auditing profession (Sejjaaka and Kaawaase, 2014). The country suffers from gross economic mismanagement and corruption is a key facet of most public and private transactions (Sejjaaka and Kaawaase, 2014). Until about 1990, there were no more than 20 professionally affiliated/ qualified accountants (World Bank, 2005) but by 2015 the profession had grown to approximately 2,000 qualified accountants registered by the Institute of Certified Public Accountants of Uganda (ICPAU). Uganda currently has a total of slightly over 200 practicing audit firms (both Small and Medium Sized Practices - SMPs and the Big 4 firms - PriceWaterhouseCoopers; Ernst & Young; Deloitte& Touché and KPMG). However, the high levels of unemployment/underemployment and the lack of financial depth in the economy restricts the areas of practice (Sejjaaka and Kaawaase, 2014). How AI is perceived in such an environment can indeed be of interest.

Before 1992, accountancy practice in Uganda was not regulated by statute (Sejjaaka and Kaawaase, 2014). An Accountants Act that was enacted in 1970 never got the Presidential assent to effectively become an enabling Law due to the political upheavals of the 1970s; it remained on the shelves of Uganda parliament until it was repealed in 1992 to pave way for the Accountants Act, 1992. This Act also established the Institute of Certified Public Accountants of Uganda (ICPAU) charged with training, administering, regulating and monitoring its members. The new Accountants Act, 2013 requires that for new membership, one has to have a CPA qualification by ICPAU. It is important to note that the Law suggests 'monitoring the monitor' since the ICPAU regulates and monitors its members, at the same time charged with professional training leading to membership. One can deduce a clear conflict of interest by the regulator and by extension how is one supposed to perceive AI in such an environment? Such is the question since Nkundabanyanga et al (2013); using reliability as a measure of quality of financial reporting, found legal framework significantly associated with it.

In 1998, Uganda adopted International Accounting Standards (IAS), and International Standards on Auditing (ISA). The intention of the Accountants Act and adoption of international standards was that moving forward, the accounting and auditing profession would be practiced and regulated at an international level resulting into quality audits and financial reports (The ICPAU, 2009). Thus, arguably, the country has instituted an appropriate legal and professional framework to enhance the audit profession. Recent efforts include the establishment of the Institute of Corporate Governance of Uganda (ICGU) meant to prescribe best practice (ICGU, 2008); The Audit Act, 2008; The Companies Act, 2012 in addition to the Accountants Act, 2013. Nevertheless,

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findings for example by the World Bank (2005) and the ICPAU (2009) continue to raise concerns over the quality of audits in the country. Thus auditors in Uganda may not be considering independence as being crucial to their certification of public reports describing companies' financial states. How such parties perceive AI is an initial step into the development of a model for AI factors in Uganda. Such a model should help in what World Bank (2005) has recommended for Uganda: the improvement in the statutory framework, strengthening enforcement mechanisms, upgrading professional education and training and enhancing capacity of regulatory and professional bodies.

### 3. Literature review

AI can be investigated mainly through two theoretical lenses: role conflict theory and agency/contracting theory. Role conflict theory assumes that 1) the auditor is required to monitor the client's financial statements and 2) the public expects the auditor to faithfully carry out that role (Koo and Sim, 1999). Therefore, the auditor serves two opposing interests; client companies and the general public (Alleyne et al., 2006). According to Rizzo et al (1970) several role conflicts exist: that between a particular role and the individual's values – person-role conflict, the intra-sender role conflict, which concerns multiple roles being allocated to an individual and the role-overload conflict where many roles are imposed on the individual, considering his or her capacity to fulfill them in light of available resources. In auditing, the most important conflict is the intra-sender role conflict (Alleyne et al., 2006) which according to Koo and Sim (1999) appears through mutually opposing expectations of role, conflicting policies and needs of others, and incompatible criteria. With this conflict, the auditor is expected to satisfy both the needs of the client management and the third party users (Alleyne et al., 2006). Moreover, Koo and Sim (1999) suggest that third party users expect the auditor to find and report all problems with the financial statements while management wishes the auditor to ignore financial statements manipulation. Quite often, the auditor will choose from these conflicting needs (Alleyne et al., 2006); impairing the auditor's independence and the ability to conduct a just audit (Schultz, 1974). An auditor that tries to be obstinately ethical in a situation of conflict, may be replaced as management would actively seek this replacement which could suggest to the auditor to bow to management's pressure, hence impairing his independence (Alleyne et al., 2006). Such a conflict between the auditor's economic motives and audit criteria was identified about 44 years ago by Goldman and Barlev (1974) along two others: that between auditors and firms; that between owners and managers. Therefore, factors such as economic dependence of the auditor on the auditee, competition within the external audit market (i.e. the fear of losing a client to a competitor) and the provision of non-audit services by the auditor are theoretically assumed to impair AI.

The agency theoretic assumption is that the relationship between employer (principal) and employee (the agent) is represented by an employment contract (Eisenhardt, 1989). In its simple form, agency theory presents a view of a relationship where parties to the contract are understood to be self-interested (Jensen and Meckling, 1976). Either party has the ability to egress the employment contract by incurring exit costs as a result of perceived imbalance or unfairness (Almer et al., 2005). This suggests that, because of information asymmetries and self-centredness, principals will seek to resolve these concerns by putting in place mechanisms to align the interests of agents with principals and reduce scope for information asymmetries and egocentricity (The Institute of Chartered Accountants in England and Wales -ICAEW (2005). In practice these include putting in place monitoring mechanisms, such as external audits (Jensen & Meckling, 1976; Fama & Jensen, 1983) to reduce information risk. The ICAEW (2005) contends that it is information asymmetry between principals and agents that creates "information risk" for the principal due to the remoteness of the principal to the information (e.g., where a shareholder is not involved in day-to-day business of the

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company as is the case in most big and modern corporations) or the agent is likely to supply biased information to the principal (e.g., manager may overstate profitability to achieve selfish interests). In terms of agency theory, the presumed role of the external auditor is to provide an independent check on the work of agents and of the information provided by an agent, which helps to maintain confidence and trust. Although, company law provides for auditors to be appointed by shareholders (except in certain rare circumstances) in practice managers, specifically the Board of Directors have considerable influence on the matter. The board recommends replacement of sitting auditors, with shareholders merely voting on whether to accept the appointment or not (Jackson, Moldrich & Roebuck, 2008). Besides, managers normally hold the proxy votes for a large number of shareholders and they also actually set the agenda of general meetings, hence having considerable influence over the appointment process. Further, boards especially through audit sub-committees are expected to monitor the quality of external audits. So in practice, auditors are hired, removed and paid by their clients' management. Indeed applying this practice to the theoretical logic, agency losses occur when managers maximize their self-interest at the expense of the principal who in this case is the audit partner (Jensen and Meckling, 1976).

Essentially, partners are the only auditors that have the responsibility to "sign off" their audit reports on their clients' financial statements (Law, 2008). As AI is key in this operation, Simunic (1984) identifies a decrease in audit independence as any situation that alters incentives such that a self-interested auditor is more likely to ignore, conceal or misrepresent his/her findings. For this reason regulatory factors such as the existence of audit committees (Cadbury Report, 1992), control over the appointment and remuneration of auditors, strong enforcement of standards and effective discipline of companies and auditors (APB, 1994) can augment AI.

Agency theory is criticised as being shareholder centric emphasising individualism yet there are other stakeholders in the financial reporting cycle and also ignores group interactions (Hung, 1998; Donaldson, 1990). It is also criticised in that it treats managers as opportunistic; motivated solely by self-interest hence ignoring those who are loyal to the firm (Granovetter, 198; Hill and Jones 1992). The apparent criticisms notwithstanding, Agency and contracting theory supports the demand for quality differentiated audits by interest groups in agency relationships and audit quality assessments are based on measures and/or factors that are observable to specific interest groups (Craswell, 2000). The Craswell argues that while some groups ("insiders") have access to observations and information that are not publicly available, others ("outsiders") must rely on observations and information that are publicly available. "Insiders" are able to utilise internal measures of audit quality such as audit teamwork, communication between audit staff and management and auditor knowledge of the client and industry. For "outsiders", the quality of the audit itself is costly or impossible to observe and, consequently, this group has to rely on quality attributes that are less costly or that are possible to observe. Accordingly, it is expected that several interest groups are likely to view length of auditor tenure, the client's financial condition, client's governance structures, and non-audit fees financial interest in auditee as factors likely to affect AI. Therefore in assessing AI, it can be argued that "insiders" and "outsiders" have differential ability to observe or gain access to information about attributes associated with AI. Following from this, it is suggested that for a meaningful understanding of AI, the opinions of various interest groups have to be enlisted in the validation of factors for AI. Thus in line with our first objective we establish whether, in the face of the company-pay model, financial statement preparers perceive threat and enhancing factors of AI the same way as users and external auditors. Thus,

*H<sub>1</sub>: Preparers of financial statements do not perceive AI undermining and enhancing factors in the same way as external auditors and users of such financial statements.*

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To ensure financial statements are fairly presented in conformity with generally accepted accounting principles is the main purpose of a financial audit. Audit quality can be defined and measured in various ways, but in this study we focus on the degree of AI as one aspect of audit quality. The assessment of quality for particular audit engagements remains somewhat murky, partly due to the users' response to the auditor's reputation (i.e. a Big vs non-Big dichotomous audit quality measurement) (Dang, Brown and McCullough, 2011). Dang et al (2011) reveals that empirical results provide support for the view that the market responds positively to reputable auditors. DeAngelo (1981) has defined audit quality as the probability of the auditor to both discover and report a breach in the client's accounting system. The former depends on the auditor's technical capabilities and the later depends on AI.

Alleyne et al (2006) referring to a wider explanation by Arens et al. (2006) and Whittington and Pany (2004) of AI, notes that AI can be assessed basing on two standards, that is, fact and appearance. Independence in fact refers to the actual objective state of the relationship between auditing firms and their clients. Independence in appearance refers to the subjective state of that relationship as perceived by clients and third parties. Yet according to Beattie et al (1999), there are four principal factors believed to impact AI: economic dependence of the auditor on the auditee, competition within the external audit market, the provision of non-audit services by the auditor, and the degree of laxity of the regulatory framework. Economic dependence can be reflected by the significant proportion of the auditor's total fees paid by any one client as a stronghold, competitive pricing by auditors, tender threats by auditees and budget pressures faced by auditors (Alleyne et al., 2006). DeAngelo (1981) suggests that the provision of non-audit services can threaten AI and Alleyne et al (2006) suggest that it places an economic bond between auditor and auditee, hence resulting in financial dependence on the client. Some studies conclude that the provision of non-audit services to auditees enhance the risk of perceived dependence (Schulte, 1965; Pany and Reckers, 1984); others find that it increases audit efficiency through economies of scope broadly categorized into knowledge spillover benefits and contractual economies (Simunic, 1984; Beck et al., 1988; Arrunada, 1999; Beattie and Fearnley, 2002; Krishnan & Visvanathan, 2011, Svanström & Sundgren, 2012). Yet others find that non-audit services have nominal or no adverse effects on the perceived AI (Pany and Reckers, 1988; Lowe and Pany, 1995; Reynolds et al., 2004; Bedard et al., 2008). Recently however, the meta-analytical studies by Pomeroy and Thornton (2008) and Habib (2009) have affirmed inconclusive or inconsistent evidence on the relation between non-audit fees and the quality of auditing. Kilgore, Harrison and Radich (2014) still note that the provision of non-audit services is at least by regulators, regarded as a threat to audit quality, because of its perceived effect on AI. They argue that when a relatively high percentage of the fees an auditor receives are derived from non-audit services, the auditor has a proportionally greater economic incentive to retain that client, which reduces their independence, and hence has the potential to adversely impact audit quality. Nevertheless a number of studies continue to uncover other factors that constrain perceived AI; lengthy tenure (Teoh and Lim, 1996), the client's financial condition (Knapp, 1985), unpaid fees, existence of audit committees and disclosure of non-audit fees (Teoh and Lim, 1996; Beattie et al., 1999); firm size (Beattie et al., 1999), financial interest in auditee (Lindsay et al., 1987), size and closeness of society by Canning and Gwilliam (1999) in Ireland and Alleyne (2002) in Barbados. On the other hand, regulatory factors have been found to augment AI in some countries. Such factors have included the existence of audit committees (Cadbury Report, 1992), control over the appointment and remuneration of auditors, strong enforcement of standards and effective discipline of companies and auditors (APB, 1994). Based on the foregoing review, the following hypotheses will be stated:

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$H_2$ : A relationship exists between AI factor structure of its observed constraining variables and the underlying latent variables

$H_3$ : A relationship exists between AI factor structure of its observed enhancing variables and the underlying latent variables.

#### 4. Methodology

##### Population and sample

We employ a quantitative design (Kothari, 2002) that involves use of a self-administered survey questionnaire to accountants in Uganda involved with entities' financial statements as preparers, external auditors or users. We use convenience sampling to contact 496 accountants and members of the Institute of Certified Public Accountants of Uganda (ICPAU) who attended the Institute's 2014 annual seminar. A total of 283 useful questionnaires were received back for analysis. Table 1 below provides a profile of the respondents, including their relationship with the financial statements, level of formal education, and whether they possess a professional accounting qualification. These factors collectively suggest that respondents had the requisite knowledge and experience to provide useful responses during the survey

**Table 1:**  
 Profile of  
 respondents

<b>Sex of Respondents</b>			<b>n</b>	<b>%</b>	<b>Posses a Professional Accounting Qualification</b>			<b>n</b>	<b>%</b>
Male	182	64	Yes	272	96				
Female	101	36	No	11	4				
<b>Highest Formal Education</b>			<b>n</b>	<b>%</b>	<b>Size of Organization (No. of employees)</b>			<b>n</b>	<b>%</b>
Diploma	4	1.4	10 or less	13	5				
Bachelors Degree	111	39	11 – 50	49	17				
Masters Degree	166	59	51 – 100	27	10				
PhD	2	0.6	Over 100	194	68				
<b>Status with Financial Statements</b>			<b>n</b>	<b>%</b>	<b>Work experience (Years)</b>			<b>n</b>	<b>%</b>
Preparer	148	52	3 years or less	50	18				
External Auditor	50	18	4 – 10 years	146	52				
User	85	30	Over 10 years	87	30				

##### Data collection instrument and measures

We divide the instrument into three sections: section 1 provides the demographics and background information of respondents. Sections 2 and 3 focused on issues identified in extant literature and previous studies (Alleyne et al, 2006; Beattie et al., 1999; Bartlett, 1993) as affecting AI. We identify thirty audit related issues for section 2 as undermining AI, and twenty three issues for section 3 as enhancing AI. Following Alleyne et al., (2006), the issues are then anchored on a five point Likert type scale asking respondents for their personal views on how each issue affects AI (enhancing or undermines), whereby 1 = Seriously undermines independence; 2 = Slightly undermines independence; 3 = no effect on independence; 4 = Slightly enhances independence and 5 = Strongly enhances independence. In line with guidance offered by Muijs (2008) and Yaghmale (2003) the scales are reviewed for appropriateness and relevance in the local context using a panel of 7 experts who return a Content Validity Index of 0.80 and above for all the issues as listed in the instrument.

##### Analysis tools

We use one-way independent ANOVA where our one independent variable (AI factors) is measured using different participants or groups (preparers, auditors and users) to examine the differences

between the groups. To estimate the models of AI factors in line with our objective, we employed structural equation modeling (SEM). This modeling technique addresses the issue of measurement error, and simultaneously estimates a system of structural equations and according to Hoyle (1995) SEM is a comprehensive statistical approach that tests hypotheses about relations among observed and latent variables. To test our H2 and H3, we tested the goodness-of-fit of measurement models using fit indices. Schumacker and Lomax (2010) report that the RMSEA 0.05-0.08 indicate close fit, TLI values close to 0.90 and GFI values close to 0.95 also reflect good model fit. Convergent validity test was performed using Bentler-Bonett Normed Fit Index (NFI); a measurement model which indicates strong convergent validity if the NFI value is above 0.90 (Mark and Sockel, 2001).

### ***Tests of factorability, validity and reliability***

We used factor analysis based on principal components and Cronbach's  $\alpha$  to examine the validity and reliability of the scales as measures of enhancing factors and undermining factors of AI. The initial establishment of convergent validity employed the principle components for each variable extracted by running principle component analysis using varimax rotation method and factor loadings below .5 coefficients were suppressed to avoid extracting factors with weak loadings. Prior to performing the Principle Component Analysis for our scales we assessed the suitability of the data for factor analysis based on sample size adequacy, the Kaise-Meyer-Olkin (KMO) and Bartlett tests. The procedure returned the KMO values: independence enhancing factors = 0.868 and undermining factors = 0.771. Bartlett's test of sphericity in all scales reached statistical significance ( $p < 0.05$ ) (significant value was 0.00 for each scale). Collectively, these results support the factorability of the correlation matrices because our correlation matrices are significantly different from the identity matrices in which the variables would not correlate with each other. The determinants for all the three matrices were greater than 0.01 implying that there was no multicollinearity or singularity between variables. For internal consistency (reliability) of our scales standardized Cronbach's  $\alpha$  coefficients for all the scales, were found to be above 0.7 (enhancing factors  $\alpha = .911$ , undermining factors  $\alpha = .811$ ). Table II shows 23 item scales that explain 66.4 % of the variance in factors enhancing AI while Table III shows 17 item scales that explain 62.6 % of the variance in factors undermining AI.

**Table II:**  
Rotated com-  
ponent matrix  
for factors  
enhancing  
independence

Scale items	Codes	Means	Component					
			1	2	3	4	5	
The audited firm being a public company trading on the stock exchange	EnInd18	3.60	.535					
The audited firm is regulated by the central bank	EnInd19	3.69	.816					
The audited firm is regulated by the Insurance regulatory authority	EnInd20	3.55	.916					
The audited firm is regulated by the Retirements Benefits Authority	EnInd21	3.53	.920					
The audited firm is regulated by the Capital Markets Authority	EnInd22	3.64	.909					
The audited firm is regulated by another regulator	EnInd23	3.73	.724					
Existence of proper corporate governance systems within firms audited	EnInd1	4.30		.745				
Existence of audit committee composed of a majority non-executive directors	EnInd2	4.29		.779				
Rotation of audit firms	EnInd3	4.07		.782				
Rotation of audit partners (at least every 5 years)	EnInd4	3.91		.737				
Rotation of audit staff (at least every 3 years)	EnInd5	3.87		.736				
The fear of being sued by audit client / risk of litigation against the auditor	EnInd6	3.37			.626			
The fear of disciplinary action by a professional body like the ICPAU	EnInd7	4.05		.763				
The risk to the auditor of losing a practicing certificate	EnInd8	4.02		.786				
The risk to the auditor's reputation from public scandals	EnInd9	4.00		.746				
Requirement of auditors to be reappointed annually	EnInd10	3.65				.643		
Requirement for incoming auditors to obtain professional clearance from outgoing auditors before accepting appointment or nomination	EnInd11	3.81				.732		
Auditors right to attend and be heard at the annual general meeting	EnInd12	4.02				.682		
Auditors rights enshrined in the law e.g. the Company's Act	EnInd13	4.01				.649		
Auditors being a big four international firm.	EnInd14	3.55					.724	
Auditors being part of an international net work of audit firms other than big 4	EnInd15	3.64					.839	
Disclosure of the non-audit fees paid to the auditor by the same audit client	EnInd16	3.54						.509
Requirement that the audit partner indicates his/her name on the audit opinion	EnInd17	3.71						.579
Component means			4.09	3.88	3.86	3.62	3.62	
% of Variance			18.7	14.8	11.5	11.1	10.3	
Cumulative %			18.7	33.5	44.0	56.0	66.4	

Bartlett Sphericity test  $\chi^2(253) = 4084.380$ ,  $p < 0.001$ ; Kaiser-Meyer-Olkin measure of Sampling Adequacy = 0.868; Determinant = 3.27E-007. Scale statistics:  $\alpha = .911$ , mean = 87.60, variance = 186.88, std. deviation = 13.67.

Notes: Factors 1 = Auditor regulation, 2 = proper governance system 3 = Deterrence measures, 4 = Auditor rights' protection, 5 = Auditor's international outlook.

**Table III:**  
Rotated com-  
ponent matrix  
for factors  
undermining  
independence

Scale items	Codes	Means	Component						
			1	2	3	4	5	6	
If audit partner's income depends on the retaining a specific client	UnInd1	1.53	.594						
If the audit firm earns non-audit fees that are $\geq 100\%$ of audit fee from same client	UnInd2	1.70	.578						
If the audit firm has been auditing a client for more than 7 years	UnInd12	1.85	.839						
If the audit firm has been auditing a client for more than 10 years	UnInd13	1.79	.847						
Not rotating audit firm	UnInd28	1.99		.732					
Not rotating audit firm staff	UnInd29	1.99		.801					
Not rotating audit firm partners on the same audit	UnInd30	2.14		.796					
Where members of the governing board controlling auditor's appointment	UnInd18	2.53			.908				
Where members of the governing board controlling auditor's remuneration	UnInd19	2.56			.905				
If there is substantial management time and costs incurred in changing auditors	UnInd23	2.75				.631			
Risk of capital markets adverse reaction to frequent auditors changes	UnInd24	2.99				.775			
The company audited is a private limited liability company	UnInd25	3.03				.687			
Where the audit firm offers an audit fee discount and low-balling	UnInd6	2.18					.753		
Where the audit firm provides executives staff recruitment services to its audit client	UnInd7	2.25					.751		
The size and closeness of the Ugandan society (People tend to know each other)	UnInd15	2.53						.729	
If the audit firm is small and local (with no international affiliation/network assn)	UnInd20	2.77						.522	
Competition amongst audit firms	UnInd21	2.71						.663	
Component mean			1.17	2.04	2.22	2.60	2.67	2.92	
% of variance			13.8	12.1	9.7	9.7	9.3	8.1	
Cumulative %			13.8	26.9	35.6	45.2	54.5	62.6	

Bartlett Sphericity test  $\chi^2(171) = 1773.879$ ,  $p < 0.001$ ; Kaiser-Meyer-Olkin measure of Sampling Adequacy = 0.771; Determinant = 0.002, Scale Statistics:  $\alpha = .811$ , mean = 39.39, variance = 69.17, std. deviation = 8.32.

Notes: Factors 1 = Financial dependence and lengthy tenure, 2 = Non-rotation of audit firm, staff and partners, 3 = Board control of auditor appointment and remuneration, 4 = Risks associated with changing auditors, 5 = Low-balling and recruitment services to audit clients, 6 = The size and closeness to society & competition.

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## 5. Results and Discussion

### Descriptive statistics

Initially we ranked (in ascending order) the mean statistics and found that among the seventeen (17) manifest variables predicted to undermine AI, the first six (6) have means below 2.0 and all relate to auditor's financial dependence on the auditee and lengthy tenure coupled with non-rotation. Similarly, we also ranked (in descending order) and found that among the 23 manifest variables predicted to enhance AI, the first 8 have means above 4.0 and all relate to regulatory factors such as the existence of audit committee and proper governance systems, deterrence measures, and auditor rights' protection by the law and rotation of audit firms. All this suggests that there was consensus of opinion that existence of appropriate regulatory regime is believed to enhance AI in Uganda. The lack of such regime when coupled with the auditor's financial dependence on the auditee highly constrains independence of the auditor.

Mean statistics in Table II suggest that financial dependence on the audit client through either non audit or audit fees, lengthy tenure (which also mirror non rotation of audit firm, staff and partners) are perceived to be the most threats to AI with means below 2. Scale statistics for this latent variable indicate a mean of 39.39, variance of 69.17 and std. deviation of 8.32. Mean statistics in Table III also show that existence of governance systems and regulatory factors are perceived to be the most AI enhancing with most of their means above 4.00. Scale statistics for this latent variable indicate a mean of 87.60, variance of 186.88 and std. deviation of 13.67. As standard deviations relative to mean values are small, the calculated means highly represent the observed data (Field, 2009; Saunders et al., 2007).

### Test of differences

The position of this paper under H1 has partly been to establish whether preparers of financial statements perceive undermining and enhancing AI factors the same way as external auditors and other users of financial reports. Results in Table IV suggest that among the component factors for AI undermining factors, there are significant differences among the users, auditors and preparers for financial dependence and lengthy tenure ( $F = 2.825, p < .10$ ), non-rotation of audit firm, staff and partners ( $F = 3.339, p < .05$ ) and board control of auditor appointment and remuneration ( $F = 5.461, p < .01$ ). Given that we do not use equal samples, we test the hypothesis that the variances of the groups are the same (homogeneity of variance) using the Levene's test and find that the test values are all not significant at .05 levels. This suggests that all the variances are not significantly different. Secondly, we carried out robust tests of equality of means using Welch F (1951) and results are also in Table IV. The results show that financial dependence and lengthy tenure ( $F = 2.870, p < .10$ ), non-rotation of audit firm, staff and partners ( $F = 3.262, p < .05$ ), board control of auditor appointment and remuneration ( $F = 5.018, p < .01$ ), are significant. This robustness test provides further validation of our results. As a post hoc procedure, and since we do not assume equal samples, the multiple comparisons using Gabriel's test again confirm the above results. The results are presented in Table V.

The results of the Gabriel's test demonstrate that preparers and external auditors have similar means ( $p > .05$ ) but not with users ( $p < .05$ ) regarding their opinions on non-rotation of audit firm, staff and partners. Again both users and external auditor have similar means ( $p > .05$ ) but not with preparers ( $p < .05$ ) regarding this dimension. These results suggest that the external auditor has a similar mean with both the user and preparer but the means for preparer and user are significantly different. Regarding board control of appointment and remuneration of external auditor, both preparer and user have similar means ( $p > .05$ ) but not with external auditor ( $p < .05$ ); and both external auditor and user have similar means ( $p > .05$ ) but not with preparer ( $p > .05$ ). The rest of the groups have similar means. These results suggest that with respect to board control

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of appointment and remuneration of external auditor, the user has a similar mean with both the preparer and external auditor, but the means of the external auditor and preparer significantly differ. We thus infer that in both cases, i.e. non rotation of audit firm, staff and partners and, board control of appointment and remuneration of auditors; there are significant differences in opinions of the preparer and the other stakeholders (users and auditor). Figures I and II show that indeed this is the case. In both cases, the preparer opines that failure to rotate auditors and the control of auditor appointment and remuneration by the board, are more AI constraining relative to the opinions of both the auditor and user regarding these factors.

**Table IV:**  
 One-way  
 ANOVA  
 test – Auditor  
 Independence  
 undermining  
 factors

				Sum of Squares	df	Mean Square	F	Sig.	Welch statistic <sup>a</sup>	F	Levene Statistic	Sig.	
Significant Fees	Between	(Combined)		3.613	2	1.806	2.825	.061	2.780	.060	0.901	.407	
and lengthy tenure	Groups	Linear	Unweighted	2.103	1	2.103	3.288	.071					
			Weighted	2.509	1	2.509	3.925	.049					
		Term	Deviation	1.103	1	1.103	1.726	.190					
			Quadratic	Unweighted	1.103	1	1.103	1.726	.190				
	Within Groups	Linear	Unweighted	1.103	1	1.103	1.726	.190					
			Weighted	1.103	1	1.103	1.726	.190					
		Term	Deviation	179.023	280	.639							
			Total			182.635	282						
	Not rotating audit firm, staff and partners	Between Groups	(Combined)	Linear	4.688	2	2.344	3.339	.037	3.262	.042	1.865	.157
				Weighted	3.982	1	3.982	5.672	.018				
Term			Deviation	4.327	1	4.327	6.164	.014					
			Quadratic	Unweighted	.360	1	.360	.513	.474				
Within Groups		Linear	Unweighted	.360	1	.360	.513	.474					
			Weighted	.360	1	.360	.513	.474					
		Term	Deviation	196.552	280	.702							
			Total			201.239	282						
Board control of appointment and remuneration		Between Groups	(Combined)	Linear	12.806	2	6.403	5.461	.005	5.018	0.01	1.138	.322
				Weighted	5.668	1	5.668	4.835	.029				
	Term		Deviation	7.169	1	7.169	6.115	.014					
			Quadratic	Unweighted	5.636	1	5.636	4.807	.029				
	Within Groups	Linear	Unweighted	5.636	1	5.636	4.807	.029					
			Weighted	5.636	1	5.636	4.807	.029					
		Term	Deviation	328.272	280	1.172							
			Total			341.078	282						
	Risks associated with changing auditors	Between Groups	(Combined)	Linear	.049	2	.024	.066	.936	.067	.935	1.586	.206
				Weighted	.030	1	.030	.081	.776				
Term			Deviation	.035	1	.035	.095	.758					
			Quadratic	Unweighted	.014	1	.014	.037	.847				
Within Groups		Linear	Unweighted	.014	1	.014	.037	.847					
			Weighted	.014	1	.014	.037	.847					
		Term	Deviation	102.685	280	.367							
			Total			102.734	282						
Low-balling and recruitment services to audit clients		Between Groups	(Combined)	Linear	2.193	2	1.097	1.411	.246	1.481	.231	.129	.879
				Weighted	1.048	1	1.048	1.348	.247				
	Term		Deviation	.795	1	.795	1.022	.313					
			Quadratic	Unweighted	1.399	1	1.399	1.799	.181				
	Within Groups	Linear	Unweighted	1.399	1	1.399	1.799	.181					
			Weighted	1.399	1	1.399	1.799	.181					
		Term	Deviation	217.692	280	.777							
			Total			219.885	282						
	The Size, Closeness to society & Competition	Between Groups	(Combined)	Linear	.377	2	.188	.509	.602	.534	.577	.182	834
				Weighted	.029	1	.029	.078	.780				
Term			Deviation	.057	1	.057	.153	.696					
			Quadratic	Unweighted	.320	1	.320	.865	.353				
Within Groups		Linear	Unweighted	.320	1	.320	.865	.353					
			Weighted	.320	1	.320	.865	.353					
		Term	Deviation	103.622	280	.370							
			Total			103.998	282						

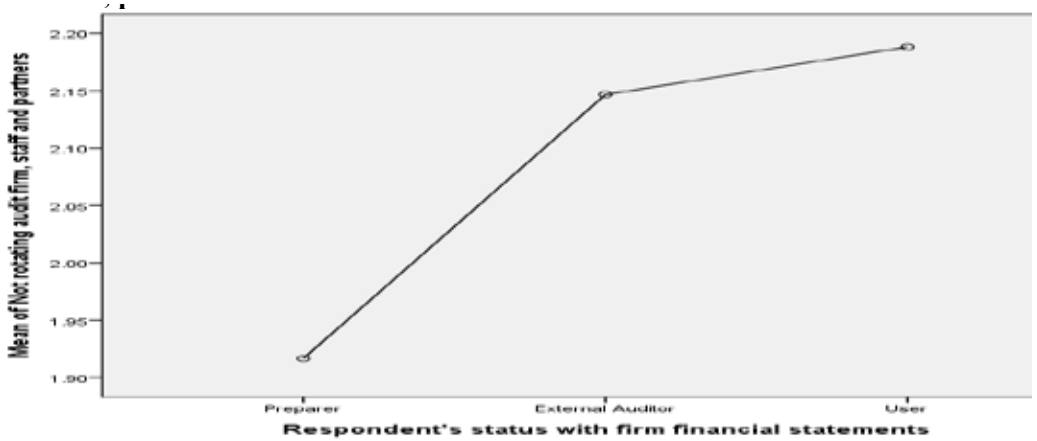
a. Asymptotically F distributed

Dependent Variable	(I) Respondent's status with firm financial statements	(J) Respondent's status with firm financial statements	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Significant Fees and lengthy tenure	Preparer	External Auditor	-.26351	.13080	.110	-.5672	.0401
		User	-.19734	.10882	.191	-.4562	.0616
	External Auditor	Preparer	.26351	.13080	.110	-.0401	.5672
		User	.06618	.14251	.953	-.2731	.4055
	User	Preparer	.19734	.10882	.191	-.0616	.4562
		External Auditor	-.06618	.14251	.953	-.4055	.2731
Not rotating audit firm, staff and partners	Preparer	External Auditor	-.23000	.13705	.230	-.5482	.0882
		User	-.27157 <sup>*</sup>	.11402	.050	-.5428	-.0003
	External Auditor	Preparer	.23000	.13705	.230	-.0882	.5482
		User	-.04157	.14932	.989	-.3971	.3140
	User	Preparer	.27157 <sup>*</sup>	.11402	.050	.0003	.5428
		External Auditor	.04157	.14932	.989	-.3140	.3971
Board control of appointment and remuneration	Preparer	External Auditor	-.53459 <sup>*</sup>	.17711	.006	-.9458	-.1234
		User	-.32401	.14736	.079	-.6746	.0266
	External Auditor	Preparer	.53459 <sup>*</sup>	.17711	.006	.1234	.9458
		User	.21059	.19298	.613	-.2489	.6701
	User	Preparer	.32401	.14736	.079	-.0266	.6746
		External Auditor	-.21059	.19298	.613	-.6701	.2489
Risks associated with changing auditors	Preparer	External Auditor	-.03009	.09906	.985	-.2601	.1999
		User	-.02342	.08242	.988	-.2195	.1727
	External Auditor	Preparer	.03009	.09906	.985	-.1999	.2601
		User	.00667	.10793	1.000	-.2503	.2637
	User	Preparer	.02342	.08242	.988	-.1727	.2195
		External Auditor	-.00667	.10793	1.000	-.2637	.2503
Low-balling and offer of recruitment services to auditee	Preparer	External Auditor	.11595	.14423	.790	-.2189	.4508
		User	-.13935	.12000	.564	-.4248	.1461
	External Auditor	Preparer	-.11595	.14423	.790	-.4508	.2189
		User	-.25529	.15715	.276	-.6295	.1189
	User	Preparer	.13935	.12000	.564	-.1461	.4248
		External Auditor	.25529	.15715	.276	-.1189	.6295
The size, closeness to society & competition	Preparer	External Auditor	.10036	.09951	.653	-.1307	.3314
		User	.02311	.08279	.989	-.1739	.2201
	External Auditor	Preparer	-.10036	.09951	.653	-.3314	.1307
		User	-.07725	.10842	.853	-.3354	.1809
	User	Preparer	-.02311	.08279	.989	-.2201	.1739
		External Auditor	.07725	.10842	.853	-.1809	.3354

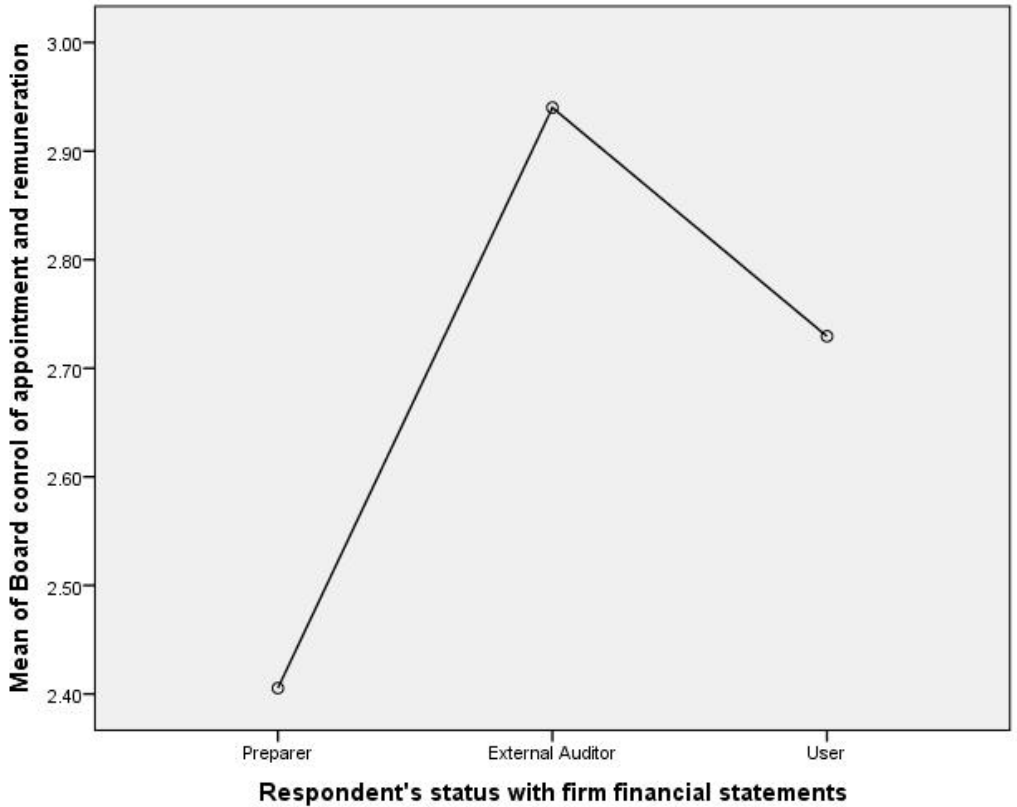
\*. The mean difference is significant at the 0.05 level.

**Table V:**  
Multiple comparisons using Gabriel's test

**Figure 1:**  
Line graph;  
status of respon-  
dents and their  
mean rating of  
non-rotation of  
audit firm, part-  
ners and staff



**Figure 2:**  
Line graph; status  
of respondents  
and their mean  
rating of board  
control of auditor  
appointment and  
remuneration.



Regarding AI enhancing factors results suggest there are no significant differences among the users, auditors and preparers with respect to their opinions regarding the AI enhancing component factors as auditor regulation, existence of proper governance system, existence of deterrence measures, auditor rights' protection and audit firm's international outlook. Still, the Levene's test values are all not significant at .05 levels, again suggesting that all the variances are not significantly different. Robust tests of equality of means carried out using Welch F (1951) indicate that the whole factor structure of AI enhancing factors is not significant. Moreover, multiple compulsions as a post hoc procedure using Gabriel's test also confirm the above results. The results demonstrate that preparers, users and external auditors have similar means ( $p > .05$ ). Therefore there are no significant differences in opinions regarding the component structure of AI enhancing factors (see Table VI and VII)

				Sum of Squares	df	Mean Square	F	Sig.	Welch statistic <sup>a</sup>	F	Levene Statistic	Sig.	
Auditor regulation	Between Groups	(Combined)		.068	2	.034	.048	.953					
		Linear Term	Unweighted	.024	1	.024	.034	.854					
			Weighted	.017	1	.017	.024	.878					
			Deviation	.051	1	.051	.072	.788					
		Quadratic Term	Unweighted	.051	1	.051	.072	.788					
			Weighted	.051	1	.051	.072	.788					
		Within Groups Total			198.950	280	.711						
				199.018	282								
Proper governance system	Between Groups	(Combined)		.587	2	.294	.426	.654	.335	.716	.847	.430	
		Linear Term	Unweighted	.001	1	.001	.002	.963					
			Weighted	.003	1	.003	.004	.950					
			Deviation	.585	1	.585	.848	.358					
		Quadratic Term	Unweighted	.585	1	.585	.848	.358					
			Weighted	.585	1	.585	.848	.358					
		Within Groups Total											
Deterrence measures	Between Groups	(Combined)		.005	1	.005	.006	.939					
		Linear Term	Unweighted	.001	1	.001	.001	.974					
			Weighted	.702	1	.702	.852	.357					
			Deviation	.702	1	.702	.852	.357					
		Quadratic Term	Unweighted	.702	1	.702	.852	.357					
			Weighted	.702	1	.702	.852	.357					
		Within Groups Total			230.673	280	.824						
				231.375	282								
Auditor rights' protection	Between Groups	(Combined)		.988	2	.494	.826	.439	.851	.430	.790	.455	
		Linear Term	Unweighted	.819	1	.819	1.370	.243					
			Weighted	.897	1	.897	1.500	.222					
			Deviation	.091	1	.091	.153	.696					
		Quadratic Term	Unweighted	.091	1	.091	.153	.696					
			Weighted	.091	1	.091	.153	.696					
		Within Groups Total			167.432	280	.598						
				168.420	282								
Audit firm's International outlook	Between Groups	(Combined)		1.212	2	.606	1.263	.284	1.084	.341	367	.693	
		Linear Term	Unweighted	.044	1	.044	.092	.762					
			Weighted	.112	1	.112	.234	.629					
			Deviation	1.100	1	1.100	2.292	.131					
		Quadratic Term	Unweighted	1.100	1	1.100	2.292	.131					
			Weighted	1.100	1	1.100	2.292	.131					
		Within Groups Total			134.334	280	.480						
				135.546	282								

a. Asymptotically F distributed.

**Table VI:**  
One-way ANOVA test – Auditor independence enhancing factors

**Table VII:**  
Multiple com-  
pulsions using  
Gabriel's test

Dependent Variable	(I) Respondent's status with firm financial statements	(J) Respondent's status with firm financial statements	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Auditor regulation	Preparer	External Auditor	-.02500	.13788	.997	-.3451	.2951
		User	.02108	.11472	.997	-.2519	.2940
	External Auditor	Preparer	.02500	.13788	.997	-.2951	.3451
		User	-.04608	.15023	.986	-.3116	.4038
	User	Preparer	-.02108	.11472	.997	-.2940	.2519
		External Auditor	-.04608	.15023	.986	-.4038	.3116
Proper governance system	Preparer	External Auditor	-.11741	.13580	.751	-.1979	.4327
		User	-.00518	.11299	1.000	-.2740	.2636
	External Auditor	Preparer	-.11741	.13580	.751	-.4327	.1979
		User	-.12259	.14797	.788	-.4749	.2297
	User	Preparer	.00518	.11299	1.000	-.2636	.2740
		External Auditor	.12259	.14797	.788	-.2297	.4749
Deterrence factors	Preparer	External Auditor	.12676	.14847	.758	-.2179	.4714
		User	-.00942	.12353	1.000	-.3033	.2845
	External Auditor	Preparer	-.12676	.14847	.758	-.4714	.2179
		User	-.13618	.16177	.780	-.5213	.2490
	User	Preparer	.00942	.12353	1.000	-.2845	.3033
		External Auditor	.13618	.16177	.780	-.2490	.5213
Rights of an auditor	Preparer	External Auditor	.10905	.12649	.753	-.1846	.4027
		User	.12317	.10524	.557	-.1272	.3736
	External Auditor	Preparer	-.10905	.12649	.753	-.4027	.1846
		User	.01412	.13782	.999	-.3140	.3423
	User	Preparer	-.12317	.10524	.557	-.3736	.1272
		External Auditor	-.01412	.13782	.999	-.3423	.3140
Audit firm's International outlook	Preparer	External Auditor	.17885	.11330	.279	-.0842	.4419
		User	.02856	.09427	.986	-.1957	.2528
	External Auditor	Preparer	-.17885	.11330	.279	-.4419	.0842
		User	-.15029	.12345	.525	-.4442	.1436
	User	Preparer	-.02856	.09427	.986	-.2528	.1957
		External Auditor	.15029	.12345	.525	-.1436	.4442

### Measurement models: Confirmatory factor analysis

To test H2 and H3 that “a relationship exists between AI factor structure of its observed constraining variables and the underlying latent variables.” and “a relationship exists between AI factor structure of its observed enhancing variables and the underlying latent variables.” respectively, we used Analysis of Moment Structures (AMOS) Graphics 19 to conduct a confirmatory factor analysis. This involved first, creating a measurement model to test the effects of the observed indicator variables (financial dependence and lengthy tenure; non-rotation of audit firm, staff and partners; board control of auditor appointment and remuneration; risks associated with changing the auditors; low-balling and recruitment services to audit clients; the size and closeness to society and competition) on an unobserved latent independent variable that we called undermining AI factors. And, second, creating a measurement model to test the effects of the observed indicator variables (auditor regulation; existence of proper governance system; deterrence measures; auditor rights protection; audit firm's international outlook) on an unobserved latent independent variable that we called enhancing AI factors

The confirmatory factor analysis using structural equation modeling (SEM) allowed us to determine whether the shared variance-covariance of the observed variables define our latent constructs and provided a more precise way to account for the error variances associated with our variables, which if untested could lead to biased parameter estimates (Schumacker and Lomax, 2010). The models in Tables VIII and IX reflect good model fits. Accordingly the model of AI undermining factors and the model of AI enhancing factors are substantiated for the Ugandan setting. In this study all the critical ratios were >1.96 and p-values were < 0.01 connoting significance. Therefore both our hypotheses H2 and H3 are supported by the results of this study.

**Table VIII CFA Model Estimates for Auditor independence undermining factors**

	Item scales	B	S.E.	C.R.	$\beta$	SMC	AVE	P
UnInd13	<--- Financial dependence and lengthy tenure	1.00			.89	.80	.51	
UnInd12	<--- Financial dependence and lengthy tenure	.92	.053	17.47	.91	.82		***
UnInd2	<--- Financial dependence and lengthy tenure	.45	.061	7.36	.43	.19		***
UnInd1	<--- Financial dependence and lengthy tenure	.42	.050	8.41	.49	.24		***
UnInd30	<--- Non-rotation of audit firm, staff and partner	1.00			.71	.50	.65	
UnInd29	<--- Non-rotation of audit firm, staff and partner	1.33	.101	13.26	.94	.88		***
UnInd28	<--- Non-rotation of audit firm, staff and partner	1.05	.089	11.81	.75	.56		***
UnInd19	<--- Board control of auditor appointment & remuneration	1.00			.89	.80	.77	
UnInd18	<--- Board control of auditor appointment & remuneration	.99	.101	9.73	.88	.77		***
UnInd25	<--- Risks associated with changing the auditors	1.00			.48	.24	.35	
UnInd24	<--- Risks associated with changing the auditors	1.50	.282	5.32	.75	.57		***
UnInd23	<--- Risks associated with changing the auditors	1.04	.202	5.17	.49	.24		***
UnInd7	<--- Low-balling and offer of recruitment services to auditee	1.00			.88	.77	.53	
UnInd6	<--- Low-balling and offer of recruitment services to auditee	.58	.135	4.28	.53	.28		***
UnInd21	<--- The size, closeness to society & competition	1.00			.42	.18	.22	
UnInd20	<--- The size, closeness to society & competition	.81	.189	4.30	.52	.27		***
UnInd15	<--- The size, closeness to society & competition	.71	.173	4.10	.45	.21		***
	Global AVE						.51	

Model fit:  $\chi^2 = 190.715$ ,  $DF = 104$ ,  $\chi^2/DF = 1.834$ ,  $p = .000$ ,  $GFI = .927$ ,  $AGFI = .892$ ,  $TLI = .926$ ,  $RMSEA = .052$   
 \*\*\*  $p < 0.01$

**Table VIII**  
CFA model  
estimates  
for auditor  
independence  
undermining  
factors**Table IX CFA Model Estimates for Auditor independence enhancing factors**

	Item scales	B	S.E.	C.R.	$\beta$	SMC	AVE	P
EnInd19	<--- Auditor regulation	.91	.05	19.43	.80	.64	.75	***
EnInd20	<--- Auditor regulation	1.00			.94	.88		***
EnInd21	<--- Auditor regulation	1.03	.03	31.73	.95	.90		***
EnInd22	<--- Auditor regulation	1.04	.04	26.60	.90	.81		***
EnInd23	<--- Auditor regulation	.77	.05	15.32	.71	.50		***
EnInd7	<--- Deterrence measures	1.00			.81	.66	.74	
EnInd8	<--- Deterrence measures	1.21	.07	17.21	.91	.83		***
EnInd9	<--- Deterrence measures	1.07	.07	16.23	.85	.72		***
EnInd14	<--- Auditor's international outlook	1.00			.77	.59	.65	
EnInd15	<--- Auditor's international outlook	1.13	.13	8.77	.84	.71		***
EnInd1	<--- Proper governance system	.91	.06	15.31	.86	.73	.83	***
EnInd2	<--- Proper governance system	1.00			.96	.92		***
EnInd11	<--- Auditor rights' protection	1.00			.69	.48	.62	
EnInd12	<--- Auditor rights' protection	1.00			.80	.64		***
EnInd13	<--- Auditor rights' protection	1.14	.07	15.99	.85	.73		***
	Global AVE						.72	

Model fit:  $\chi^2 = 160.681$ ,  $DF = 81$ ,  $\chi^2/DF = 1.984$ ,  $p = .000$ ,  $GFI = .934$ ,  $AGFI = .902$ ,  $TLI = .965$ ,  $RMSEA = .059$

**Table IX-**  
CFA model  
estimates  
for auditor  
independence  
enhancing  
factors

### Discussion

The primal argument of this paper has thus far been that factors affecting AI might be context specific and so we set to examine this assumption by obtaining views of financial statements preparers, external auditors and users of financial statements. By seeking for the views of preparers, contrary to previous studies, it was to establish whether even in the face of company pay model the preparers of financial statements perceive factors affecting AI the same way as auditors and external users.

In testing the difference in opinions generally, the finding of significant differences in opinions at  $<.10$  or better regarding financial dependence, non-rotation and board control of

appointment and remuneration suggests that while these factors rank highly on constraining independence, the extent to which they do so is perceived differently among preparers, external auditors and users. This is interesting because we find that for these factors, the preparer opines that controlling the appointment and remuneration of the auditor by the board and non-rotation of auditors is more AI undermining relative to the opinions of both auditor and user. So in the words of Knechel et al (2013), ‘looking through the eyes’ of preparer has suggested that the extent to which factors are perceived as constraining AI varies with different stakeholders of AI. This appears to offer hope in settling the debate on perception of AI factors. And applying this discussion to agency theory suggests that because the preparers perceive controlling appointment and remuneration of auditors to undermine their independence more than the users and auditors think; in egocentricity, the board of directors will always be interested in recommending auditors to the shareholders for hiring. Furthermore, board of directors will always be motivated to control auditor remuneration. And we know that the external auditors’ principal role is to mitigate information asymmetry between the shareholders and the board of directors or management for that matter; the above discussion suggests one such likely cause of agency losses. Put differently, because the auditor knows his de facto hirer who is also the remunerator, in self-interest, the auditor is likely to conceal or even misrepresent her/his findings – such is also the view that is held by Simunic (1984). Our findings further add to the observations of Craswell (2000) in a sense that we find differential perception of the insiders (preparers) and outsiders (e.g. users) regarding board control of auditor appointment and remuneration as factors undermining independence of the auditor.

Applying the same discussion above to non-rotation of audit firms, we can deduce that self-interested preparers are likely to be happy with non-rotation of auditors. Similarly, because of high levels of unemployment/underemployment and the lack of financial depth in Uganda’s economy that restricts areas of practice (sejjaaka and Kaawaase, 2014); a self-interested auditor is likely to favour non-rotation. This provides further support for the assumptions of role conflict theory. While the auditor is expected to monitor client’s financial statements and the public expects him to carry out that role faithfully (Koo and Sim, 1999), performance of those two roles is likely not to be forthcoming if the auditor is faced with inadequate financial depth in an economy and high levels of under/unemployment, yet the self-interested preparer perceives non-rotation to be independence undermining.

Considering the results of testing hypotheses H2 and H3, we report a good fitting model for AI undermining factors and also for AI enhancing factors for a developing country context. These models suggest that there is widespread perception that when boards control the appointment and remuneration of auditors, this constrains the auditors’ independence. This result confirms the argument of Moore et al (2006) that clients having the freedom to choose their auditors will select an auditing firm based on the probability that the auditor will deliver a clean audit opinion. The independence of the auditor is also greatly perceived to be constrained when the audit firm, staff and partner do not rotate. Financial dependence on the auditee and lengthy tenure of the auditor also constrain the auditor’s independence. Generally there are seventeen (17) manifest variables loading onto six (6) latent variables that augment the model of AI undermining factors in this context. Still, there are fifteen (15) observed variables loading onto five (5) latent variables that augment the model of AI enhancing factors in this context. These findings support the agency theory assumption suggesting that both client management and the auditor are effort averse and utility maximizing (Antle, 1982; 1984) and suggests that management can be motivated to misrepresent the financial condition of a company and, in the absence of some form of restraint, the auditor will not expend effort and report this, to the detriment of the owner (Kornish and Levine, 2000; Moizer, 1997). The finding that financial dependence on the auditee and lengthy tenure of the auditor

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is perceived as auditor's independence undermining is interesting because it is contrary to previous findings such as those of Moizer (1997) that suggest that the greater the audit firm's economic interest, the greater will be its independence.

Among the AI enhancing factors, the existence of proper governance systems including the audit committee is widely perceived to enhance AI. Also, auditors who subscribe to a regulatory body are perceived to be independent. Moreover, deterrence measures like fear of losing a practicing certificate, reputation and any other likely disciplinary action by a professional body is perceived to enhance AI. Most of these factors are indeed regulatory and confirm the suggestions by Cadbury report, 1992 and APB (1994).

#### **6. Conclusion, implications and areas of further research**

The purpose of this study was two-fold: to establish whether financial statement preparers perceive AI undermining and enhancing factors the same way as users and external auditors and, to develop models for AI factors in Uganda. We surveyed 283 preparers of financial statements, external auditors and users of financial statements. On a scale of 1 (seriously undermines) to 5 (strongly enhances) we asked them for their personal views on how certain issues affect AI. We applied the principle component analysis to reduce the factors to a manageable level and, to test our two hypotheses relating to existence of a relationship between AI factor structures, and then we applied the confirmatory factor analysis to validate models of AI factors relevant to Uganda. We also used one-way independent ANOVA to examine the groups' differences in opinions regarding AI factors. Results show significant differences between the groups regarding two independence latent threat factors; non-rotation and control and remuneration of auditors by the board. The three groups do not agree on the importance of these two latent threat factors, with the preparers giving the factors more weight than by the auditors and users. Our results also substantiate two models of AI factors. Board control of auditor appointment and remuneration, non-rotation and lengthy tenure, lowballing and offer of recruitment services to auditee and economic reliance of auditors on their clients are considered the most important independence-threatening factors. Conversely, the existence of proper governance structure including independent audit committee, regulatory rights and requirements and deterrence measures posing risks in fulfilling their audit engagement and international connection of the audit firm are perceived by the three groups to enhance AI.

These results point to important implications. Antle (1984) anticipated that, at the very least, it should be assumed that auditors will only engage in actions that serve their rational self interest. As Moore et al (2003) have put it; the evidence presented here suggests the upsetting possibility. From the results of ANOVA tests it concludes that for the case of non rotation of audit firm, staff and partners, board control of appointment and remuneration of auditors; the preparers (management) opine that failure to rotate auditors and the control of auditor appointment and remuneration by the board, are more AI constraining relative to the opinion of auditors. As Uganda's economy is highly characterized by under/unemployment and limited financial depth that restrict the areas of practice, our results suggest that problems of conflict of interest are likely to be more intense than is commonly assumed in, perhaps, economies without such challenges. Given this context however, an auditors' interest should be considered material because it presents a risk of impaired objectivity with a probability so high that the interest reasonably can be assumed to affect the outcome of audits. Accordingly, additional mechanisms are needed to protect the auditors' independence in developing country contexts.

Our models suggest factors that potentially undermine or enhance AI in Uganda. As a starting point since there are no significant differences between the various groups regarding independence enhancing factors, there is need to strengthen those factors against potential threats to AI. Also given our findings, we suggest that while the auditor client relationship can remain intact, the audit client should apply to a third party for an auditor. This third party could be a regulator say Bank of Uganda

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in case of commercial banking institutions or a supervisory body, say ICPAU. The client should not have powers to remove the auditor during the auditor's fixed term of office say 5 years. This is a significant departure from the recommendation by Moore et al (2006) that the auditor should be chosen by the audit committee of the board. Moreover, while our recommendation is based on empirical evidence presented in this paper, it is also substantiated by the views of the European Commission:

Auditors are appointed and paid by the entity that needs to be audited and this as part of a commercial tendering process. The fact that auditor's responsibility is to the shareholders of the audited company and other stakeholders although they are paid by the audited company creates a distortion within the system. The Commission is considering the feasibility of a scenario where the audit role is one of statutory inspection wherein the appointment, remuneration and duration of the engagement would be the responsibility of a third party, perhaps a regulator, rather than the company itself" (The European Commission, 2010, p. 11) .

We believe our recommendation offers more hope in the direction of AI protection because extant literature suggests the audit committee of the board could still be self-interested and concerns about financial reporting quality and frequent accounting scandals cast doubt into the effectiveness of audit committees as a key governance mechanism (Bronson et al., 2009). Moreover, Cohen et al (2002) who interviewed external audit partners to inter alia solicit their views on the impact of audit committees on auditing found that auditors view audit committee members as often lacking the expertise to do their jobs effectively. Because those "governing" and those "being governed" are inseparable, Cohen et al. (2002) suggests that audit committees are unlikely to be effective if senior management does not want to "be governed". Our recommendation too departs from that made by Hemraj more than a decade ago that company law should make it mandatory for shareholders to appoint auditors (Hemraj, 2003). We believe that our recommendation is superior since by shareholders appointing auditors, another principal-agent relationship is created between the auditor and the appointing authority, with attending agency conflicts. These conflicts may require yet another mechanism to align the interests of both parties, for instance, need for the auditor to be monitored by another party (other than the board and shareholders), like the regulator of auditors e.g. by a professional body like the ICPAU. Our recommendation is thus pragmatic. Following from this, a notable theoretical implication is that agency theory and role conflict theory are indeed plausible frameworks for understanding perceptions of the factors that affect AI.

The findings need to be interpreted in the light of the limitations of the study. First, the usual limitations that are present in a survey method also apply in this study. As surveys rely on reports of behaviours by respondents rather than observations of behaviour, it is susceptible to measurement error (Singleton and Straits, 2010). Second, we use the previously selected factors affecting AI as they are the most commonly used by other studies and mostly supported by literature. Third, we only used a questionnaire instrument to collect data from respondents who we selected conveniently and this coupled with the study's cross-sectional design, we did not conduct follow up interviews or focus group discussions to explore the identified crucial factors further and also why respondents held certain views. Thus this cross-sectional study only provides a snapshot of opinions on the factors that most likely affect AI. However, this sets an agenda for future research employing a longitudinal design to provide better insights into the issues. Well, the findings in this paper provide insights into an important issue; factors affecting AI in a developing country context. Indeed, we undertake a factor analysis coupled with confirmatory factor analysis to examine the potential inter-correlations that could exist between different AI factors obtained from literature - an analysis that reduced these variables into the more important factors for Uganda and utilized in ANOVA analysis. A qualitative extension of this study could provide useful insights and support

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to the quantitative findings.

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