

**FACTORS DETERMINING INTERNAL AUDIT FUNCTION EFFECTIVENESS
OF LISTED COMPANIES IN TANZANIA: AN INSTITUTIONAL THEORY
PERSPECTIVE**

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ABSTRACT

The purpose of this research was to examine management support and professional proficiency as determinants of internal audit function effectiveness of listed companies in Tanzania. The study applied cross-sectional survey strategy. Data were collected through survey questionnaire responses to companies listed at Dar es Salaam Stock Exchange (DSE) in Tanzania. Data were analysed through variance based, partial least squares structural equation modeling (PLS-SEM). The study reported R² of 0.545 implying that management support and professional proficiency together explained 54.5% variation in the internal audit function effectiveness. The study finding was that professional proficiency positively and significantly is related to internal audit function effectiveness of these companies. However, management support was not statistically significant determinant of IAF effectiveness. These findings depict that in less developed economies professional proficiency is more important than management support because of infancy corporate governance and it is established as a compliance symbolic function.

Keyword: Professional Proficiency, Management Support, IAF, Institutional Theory, DSE.

1. INTRODUCTION

Internal audit function (IAF) has evolved over years to provide various services beyond monitoring and compliance audit. The transformation of IAF is in line with growth in size and complexities of many businesses and need for a quality internal controls today than ever due to technological changes, emerging risks and increased regulatory requirements (Whittington & Pany, 2012). Equally, the recent accounting scandals of Worldcom, Enron, Palmat, and collapse of Uchumi Supermarkets among others has intensified pressures to IAF to effectively play its roles of assurance and consultancy in internal control systems, risk management systems and corporate governance practices (Bananuka, Nkundabanyanga, Nalukenge, & Kaawaase, 2018; Lenz, Sarens, & Hoos, 2017; Mihret & Grant, 2017).

The evolution of IAF has been echoed by IIA, (2015) in the new definition for IAF as “an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes”

Effectiveness of IAF has been hotly debated by many scholars but no agreed conceptual framework for measuring it (Chevers, Lawrence, & Laidlaw, 2016; Coetzee & Erasmus, 2017; Cohen & Sayag, 2010; Endaya & Hanefah, 2013; Jiang, André, & Richard, 2018; Mbelwa & Lenatusi, 2019; Nicodemus, 2010; Ramachandran, Subramanian, & Kisoka, 2012). This debate is ongoing and will not end because effectiveness is context specific and most of the researches focused on the United States of America and other western countries with matured corporate governance and developed internal audit profession unlike in less developed countries (Binti, 2015; Fairchild, Gwilliam, & Marnet, 2019). Cohen & Sayag, (2010) reported that IAF effectiveness depends on management support as other factors are as a result of management decision. They find that professional proficiency of internal auditors as professional career, certification and adoption of IIA standards are not internal management characteristics hence irrelevant for the case of Israel.

Paradoxically, Jiang et al.,(2018) found that management support is not a dominant factor as they dislike an effective IAF to avoid thorough scrutiny in their opportunistic behaviour to mismanage company resources at the expense of its shareholders. Likewise, Chevers et al., (2016) found that both management support and professional proficiency as significant factors for IAF effectiveness. Thus, it seems context determine research outcome hence the need for this research paper (Binti, 2015).

This study is guided by institutional theory. This theory maintains that the company internal management control environment and professionalism pressures management to support effectiveness of IAF (Barac, Coetzee, & Van Staden, 2017; Coetzee & Erasmus, 2017; Lenz, Sarens, & Jeppesen, 2018; Vadasi, Bekiaris, & Andrikopoulos, 2020). However, Lenz et al ., (2018) claimed that professionalism can be a dominant driver of IAF effectiveness especially when the profession of internal auditor is scarcely understood in the organization. They maintained that institutionalization of professional identity and practices in the company make IAF effective.

Interestingly, Cohen & Sayag, (2010) found that internal pressure drives IAF effectiveness since it is an internal control mechanism. It helps the organization to prosper hence management support. This study has however observed that professionalism is the dominant force for IAF effectiveness.

This paper is structured as follows. The next section describes a theoretical literature review and develops hypothesis guiding the study. It follows with methodology of the study in section three. Empirical data analysis and findings are presented in section four. Section five discusses the findings. Ultimately, conclusion, recommendations, study limitations and suggestion for future studies are found in section six.

2.THEORETICAL LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT.

2.1.Institutional theory

The institutional theory postulates that organizational structures and practices are formed in conformance to institutional pressures emanating from legitimated elements, professional certifications, standards and states constraints (Meyer & Rowan, 1977; Mihret, 2010). These pressures lead to IAF effectiveness in a company (Coetzee & Erasmus, 2017). Equally, IAF is confronted with institutional pressures from internal and external environment (Coetzee &

Erasmus, 2017). In that regard, IAF is faced with internal pressures. Organizations are heterogeneous with different internal resources, processes and relationship which are determined by management as a support to the function (Eulerich & Lenz, 2019; Roussy, Barbe, & Raimbault, 2020). In line with that, IAF effectiveness hinges on management support as they set it with objectives in mind (Azzali & Mazza, 2018).

Likewise, IAF is confronted with external pressures as it formed coercively to meet statutory requirements, mimic other organizations best practices to attain institutional norms (Coetzee & Erasmus, 2017; Joe, 2019). These external pressures were referred to as coercive, mimetic and normative isomorphism because once adopted by an organization they become institutionalized uniformly in similar institutions (DiMaggio & Powel, 1983). Vadasi, Bekiaris, & Andrikopoulos, (2020) argued that external pressures of normative isomorphism add to IAF effectiveness particularly the adoption of International Standards for the Professional Practice of Internal Auditing (ISPPA) issued by the International Internal Audit (IIA) global a standard-setter worldwide. Simultaneously, it is argued that normative pressures reveal itself in developing countries because IAF is a recent phenomenon and less understood by stakeholders, so to be effective IAF has to develop a professional identity and institutionalize its practices in the company (Lenz et al., 2018).

Institutional theory has been applied by different scholars in a different context to study IAF effectiveness (Al-Twaijry, Brierley, & Gwilliam, 2003; A. Cohen & Sayag, 2010; Endaya & Hanefah, 2016; Mihret, James, & Mula, 2010; Vadasi et al., 2020). Al-Twaijry et al., (2003) employed institutional theory to research on establishment of IAF in Saudi Arabia context and they concluded that this theory is relevant particularly coercive isomorphism pillar. Likewise, Rainer, (2014) applied institutional theory in investigating IAF effectiveness in Germany and found that both external pressures (global and national factors) and internal pressures (company specific factors) are relevant but internal factors are more dominant.

In light of the above studies, we use institutional theory to explain IAF effectiveness in Tanzania.

2.2. Internal audit function effectiveness.

The word effectiveness is an abstract concept connoting different meaning to different people. Effectiveness in general terms is the achievement of the stated goals and objectives (Christopher, Sarens, & Leung, 2009). IAF is established to assure the management on the effectiveness of internal controls, risk management and good governance processes (Christopher et al., 2009).

Surprisingly, IAF effectiveness is an area scarcely researched due to reliance on external auditors assessment of internal auditors (Cohen & Sayag, 2010; Endaya & Hanefah, 2013). Although there are few studies on IAF, scholars use different variables for IAF effectiveness in different contexts (Chevers et al., 2016; Cohen & Sayag, 2010; Mbelwa & Lenatusi, 2019; Shohihah, Djamhuri, & Purwanti, 2018). In Indonesia, a developing country, Shohihah, Djamhuri, & Purwanti, (2018) observed that internal auditor competence, independence, relationship between external and internal auditor and management support as determinants of IAF effectiveness. Conversely, Cohen & Sayag, (2010) find that management support, organizational independence of internal auditors as key determinants of IAF effectiveness in Israel a developed country. They observed also that quality of audit work, professional proficiency and career and advancement were not statistically significant determinants of IAF effectiveness in Israel.

A study done in Jamaica by Chevers, Lawrence, & Laidlaw, (2016) found that quality of audit investigation, organizational independence, professional proficiency and management support are significant determinants of IAF effectiveness in Jamaican commercial banks. Likewise, Mbelwa & Lenatusi, (2019) found that independence and objectivity, communication, role and scope, competence and work performance are key determinants of IAF effectiveness in oil and gas in Tanzania.

Consequently, the literature reviewed above has shown that determinants of IAF effectiveness are context specific as different scholars report different results though research on similar constructs in different parts of the world. There is a tendency for less developed countries to have similar determinants of IAF effectiveness Therefore this study examined the role of management support in comparison with professional proficiency as dominant factors for IAF effectiveness of listed companies in Tanzania.

2.3. Professional Proficiency

It is argued that professional proficiency is related to IAF effectiveness in an organization (Alzeban & Gwilliam, 2014b; Chevers et al., 2016; Endaya & Hanefah, 2016; Vadasi et al., 2020). Similarly, Vadasi et al., (2020) maintained that IAF compliance with the Institute of Internal Auditors (IIA) standards and guidelines, professional certification, experience, training and membership to IIA tend to enhance effectiveness of IAF through professional proficiency.

IIA (2015) defines professional proficiency as “knowledge, skills and other competencies required of internal auditors to efficiently carry out their professional responsibilities”. These competencies accrue over years through experience, training and acquisition of professional certification like Certified Public Accountants (CPA), Certified internal auditor(CIA) which enable internal auditors to render effectively different services such as risk management, internal controls and governance processes.

Cohen and Sayag (2010) contend that internal audit department must have appropriate professional staff with relevant training, education and experience to discharge its audit work efficiently and effectively. As pointed out earlier, Chevers et al., (2016) found that professional proficiency positively affects internal audit effectiveness in Jamaica Commercial banks but Cohen and Sayag, (2010) found that professional proficiency not a significant factor for IAF effectiveness in Israel. These perplexing results may prove that in different setting determinants of effective IAF may vary. Therefore, the following hypothesis is a result of the literature review.

H1: Professional proficiency is positively and significantly related to internal audit function effectiveness of listed companies in Tanzania.

2.4. Management Support

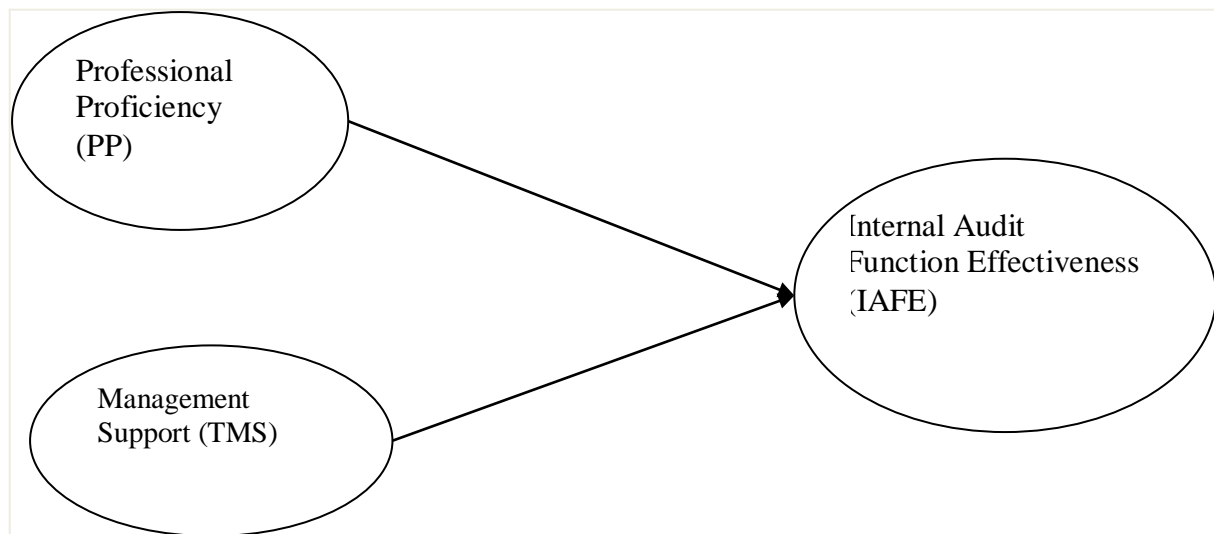
It is Argued that management support is indispensable for any function in the organization to be effective (Alsaad, Mohamad, & Ismail, 2017). Management support refers to commitment and leadership philosophy in advocating for the importance of IAF activities (Shbail & Turki, 2017). This implies that support for IAF in terms of financial resources, sufficient staff with requisite skills and implementation of findings and recommendations of internal audit all depends on management decisions (Chevers et al., 2016; Cohen & Sayag, 2010). Similarly, studies have found that management support is a cornerstone of IAF effectiveness. Other determinant factors

like organizational independence and objectivity, recruitment of sufficient competent internal auditors, funds for career development and training and establishment of an effective audit committee relies on management support (Alkebsi & Aziz, 2017; Alqudah, Amran, & Hassan, 2019; Alzeban & Gwilliam, 2014a; Eulerich & Lenz, 2019; Gamayuni, 2018). Therefore management support is predicted as the major ingredient for IAF effectiveness in the company which culminates to the hypothesis of the study stated below.

H2: management support positively and significantly determines IAF effectiveness of listed companies in Tanzania.

Figure 1 shows the hypothetical relationship of professional proficiency (PP), management support (TMS) and Internal Audit Function effectiveness (IAFE) of listed companies in Tanzania.

Figure 1: Conceptual Framework



Source: A literature review 2019

3. RESEARCH METHODOLOGY

The study rests on positivist philosophy and cross-sectional survey strategy. A survey questionnaire was used to collect primary quantitative data to fulfill the study objective (Saunders, Lewis, & Thornhill, 2012). A cross-section survey strategy was employed because of its economical advantage, its ability to approve/refute theories, its application at a specific point in time, its ability to include manifold of variables and its ability to collect data of homogeneous and unidimensional items (Mbelwa & Lenatusi, 2019)

The study applied purposive-judgmental sampling technique to draw respondents from 27 listed companies in Tanzania. The listed companies at DSE at 31st December 2018 were 28 companies but one company was excluded as it did not meet inclusion criteria employed by this study. The inclusion and exclusion criterion was that a company must be a public limited listed at DSE in Tanzania, has IAF, its shares traded freely at DSE and active operating by 31st December 2018 (Patino & Ferreira, 2018). Non probability sampling for this study was deemed appropriate as the

purpose was to test the theory in order to explain determinants of IAF effectiveness (Memon, Ting, Ramayah, Chuah, & Cheah, 2017).

Respondents for this study were Chief executive officers, Board members, Audit committee members, Head of Finance, Head of Internal Audit, Chief accountants, Head of Human Resources and Legal officers for the listed companies in Tanzania. The respondents were chosen by virtue of their position as they were strategically positioned to have relevant and reliable information on assessment of IAF in the companies.

Data for the research were collected from Feb 2019 to September 2019. 160 self-administered closed-ended questionnaires were given to the respondents face to face or through an email attachment. Respondents were asked to rate their perception on the questionnaire on a 5 point Likert type scale where 1 stood for “strongly disagree” and 5 for “strongly agreed”. 92 valid questionnaires were returned which was equivalent to 57% response rate. SPSS software version 22 was used to analyse demographic characteristics of respondents while Smart PLS-SEM version 3.2.9 software developed by Ringle, Wende, & Becker, (2015) was used to model relationship between professional proficiency, management support and IAF effectiveness of listed companies in Tanzania. Partial Least Square-Structural Equation Modeling (PLS-SEM) was chosen because it can work well with small sample size, non-normal data distribution, model complexity where latent variables were measured reflectively by indicators and explanatory of dependent variable (Hair, Howard, & Nitzl, 2020). PLS-SEM was also chosen due to its suitability for theory confirmation (Lowry & Gaskin, 2014)

3.1. Model Development.

The study aimed to analyse the effect of management support and professional proficiency on IAF effectiveness of listed companies in Tanzania. The model was developed on a partial least square structural equation modeling basing on the construct generated from the institutional theory. PLS-SEM has two parts; measurement model relates indicators for respective latent variables and structural model relates latent variables against other latent variables (Henseler, Hubona, & Ray, 2016; Tenenhaus, Vinzi, Chatelin, & Lauro, 2005). The structural model comprised management support, professional proficiency and IAF effectiveness variables extracted from institutional theory. Measurement model was based on validated instruments from prior studies but adapted to suit Tanzanian context as per Table 1 below.

Table: 1 Constructs measurement model

| Latent Variable | Indicators | Scale | Author(s) |
|--|---|--------------------------|---------------------------|
| Internal Audit Function Effectiveness (IAFE) | IAF recommendations are constructive and relevant (IAFE_1) | Interval (5-point scale) | Cohan and Sayag (2010) |
| | IAF recommendations are easily implementable (IAFE_2) | | |
| | IAF recommendations improve internal controls of the company (IAFE_3) | | Coetze and Erasmus (2017) |
| | IAF provides quality reports for company operations (IAFE_4). | | |
| | IAF objectives always focus on testing | | |

| Latent Variable | Indicators | Scale | Author(s) |
|------------------------------|---|--------------------------|--|
| | high risk areas(IAFE_5) | | |
| | Management satisfied with contributions of IAF(IAFE_6) | | |
| | Board of directors satisfied with added value of IAF(IAFE_7) | | |
| | IAF contributions meet my expectations(IAFE_8) | | |
| Management support (TMS) | Management considers IAF as a valuable unit in the company(MS_1) | Interval (5-point scale) | Endaya and Hanefah (2016) Cohan and Sayag(2010),Barišić and Tušek 2016),Chevers, Lawrence et al. (2016),Alzeban & Gwilliam (2014) |
| | Management ensures IAF findings and recommendations are implemented(MS_2) | | |
| | Top management provides input into IAF annual plans(MS_3) | | |
| | Management support IAF with resources for training and development(MS_4) | | |
| Professional proficiency(PP) | Internal auditors have requisite professional qualifications in auditing (PP_1) | Interval (5-point scale) | Endaya and Hanefah(2016), Cohan and Sayag (2010) Mustika(2015), Chevers, Lawrence et al. (2016) |
| | Internal auditors apply international internal audit professional standards(PP_2) | | |
| | Internal auditors exhibit technical competence and proficiency while auditing(PP_3) | | |
| | Internal auditors have adequate knowledge of the business operations(PP_4) | | |

Literature review 2019

The combination of the structural model and measurement model together form the hypothesized model of the study. The structural model is the hypothesis test model of the study with constructs of IAFE, MS and PP (Hair, Ringle, & Sarstedt, 2011). Measurement model is the confirmatory factor analysis (CFA) comprised of indicators of IAFE_1 to _8; MS_1 to 4 and PP_1 to _4 as indicators of the constructs as per Table 1 above.

4. DATA ANALYSIS AND FINDINGS.

The study confirmed non-response bias as a result of common method bias test as recommended by Kock, (2017). Besides, data were also checked for outliers, missing data, normality and straight-lining. Similarly, the data attained sampling adequacy as per Keiser-Meyer -Olkin (KMO) and significant Barlett’s test of sphericity(Pallant, 2011).

4.1 Respondents profile

Table 2 reported demographic profile of the respondents. At first glance, male respondents were 81.5% as compared to 18.5% of female. Regarding education, Table 2 shows that 94.6% were graduates while 5.4% were non-degree holders. This gives impression that respondents are educated enough to understand survey questionnaire to provide pertinent responses. As for the profession of the respondents, Table 2 shows that 52.2% are Certified Public Accountants while 18.5% are finance/banking professionals. This revealed that the respondents were knowledgeable enough in the field of the study as 71% are professional in finance. Regarding sector of the respondents, Table 2 reports that 59.8% are from financial and insurance sector while 20.7% are from the manufacturing industry which enables this study to get perception of respondents from different industries. As for designation of the respondents, Table 2 also reports that 10.9% are CEOs, 15.2% are Finance Directors, 23.9% are Heads of Internal Audit while 17.4% had different titles. Regarding working experience, Table 2 reports that 42.4% of respondents had more than 11 years experience while 6-10 years are 26.1% and 31.5% had 6-10 years of work experience which depicted that the respondents had pertinent experience to evaluate IAF effectiveness in their respective companies.

Table: 2: Demographic Profile of Respondents

| Category | Item | No of Respondents: (N=92) | Valid Percent % |
|-----------------------|-------------------------------|--------------------------------------|------------------------|
| Gender | Male | 75 | 81.5 |
| | Female | 17 | 18.5 |
| Age | Below 30 | 3 | 3.3 |
| | 31-40 | 34 | 37.0 |
| | 41-50 | 30 | 32.6 |
| | Above 50 | 25 | 27.1 |
| Education | Secondary School | 2 | 2.2 |
| | Diploma | 3 | 3.3 |
| | Bachelor Degree | 39 | 42.4 |
| | Masters degree | 48 | 52.2 |
| Profession | Certified Internal Auditor | 4 | 4.3 |
| | Certified Public Account | 48 | 52.2 |
| | Lawyer/Advocate | 7 | 7.6 |
| | Finance/Banking | 17 | 18.5 |
| | Engineer | 5 | 5.4 |
| | HR | 8 | 8.7 |
| | ICT | 3 | 3.3 |
| Company Sector | Manufacturing | 17 | 18.5 |
| | Financial and Insurance | 53 | 57.6 |
| | Information and communication | 8 | 8.7 |
| | Mining & Quarrying | 3 | 3.3 |
| | Transport and Storage | 4 | 4.3 |

| | | | |
|---------------------------|------------------------|----|------|
| | Others | 7 | 7.6 |
| Designation | CEO/MD | 10 | 10.9 |
| | Chair-Audit Committee | 4 | 4.3 |
| | Director Finance | 14 | 15.2 |
| | Director-HR | 6 | 6.5 |
| | Chief Accountant | 9 | 9.8 |
| | Head of Internal Audit | 22 | 23.9 |
| | Company Secretary | 5 | 5.4 |
| | Head ICT | 5 | 5.4 |
| | Others | 17 | 18.5 |
| Working experience | 1-5 years | 29 | 31.5 |
| | 6-10 years | 24 | 26.1 |
| | 11 years and above | 39 | 42.4 |

Source: Primary data analysis 2019

4.2.Evaluation of Outer Measurement model.

The measurement model was checked for attainment of quality criteria for reliability and validity (Hair Jr., Howard, & Nitzl, 2020). Construct reliability or internal consistency was checked through both composite reliability and Cronbach's alpha (Hair Jr., Hult, Ringle, & Sarstedt, 2017). While construct validity was measured by both convergent validity and discriminate validity (Pallant, 2011).

4.2.1.Construct Reliability.

Reliability or internal consistent of the measurement instrument was checked through composite reliability(CR) and Cronbach alpha coefficient with a minimum cut-off of 0.70 (Sarstedt, Ringle, & Hair, 2017b; Sarstedt, Ringle, Smith, Reams, & Hair, 2014). The study reported achievement of reliability with CR and Cronbach α minimum value of 0.844 and 0.754 respectively as indicated in Table 3.

4.2.2.Convergent Validity.

Convergent validity measures the extent to which indicators in unison measure the same latent variable they belong to. Convergent validity was evaluated through indicator reliability and Average Variance Extracted(EVA) (Hair Jr. et al., 2020). Indicator reliability was tested through outer loadings of the latent variables in the model (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). The study applied established variables hence factor loadings above 0.50 were confirmed appropriate as per Table 3 (Hair Jr, Black, Babin, & Anderson, 2014). Additionally, AVE of 0.50 or higher is considered appropriate as indicators measure more than 50% of their respective construct as compared to the error variance (Fornell & Larcker, 1981; Sarstedt et al., 2017b). Accordingly, Table 3 confirmed achievement of convergent validity as all latent variables AVE were above 0.50.

4.2.3.Discriminant validity.

Discriminant validity shows that indicators and their latent variables are unique and uncorrelated to construct in the model(Gaskin, 2016). Three criteria of Fornell-larker, Cross-loading and Heterotrait-Monotrait (HTMT) ratio of correlation were applied in the study (Ali, Ali, Badghish, & Baazeem, 2018; Sarstedt et al., 2017b). Anderson & Gerbing, (1988) and Hair et al., (2020)

posit that Fornell&Larcker criteria for assessment of discriminant validity require that square root of the average variance extracted (AVE) in the diagonal values of a construct to be higher than values in its column and row which is achieved by this study as per Table 4.

Cross-loading assessment checks whether an indicator is mistakenly assigned to a wrong construct (Voorhees, Brady, Calantone, & Ramirez, 2016). Chinn, (1998) provides that to attain discriminate validity by cross-loading test, indicators should load more in its own latent variable than indicators from other constructs which the study achieved as per Table 5.

Heterotrait-Monotrait ratio of correlation (HTMT) was tested for assessment of discriminant validity with a cut-off ratio of 0.85 (HTMT) (Henseler, Ringle, & Sarstedt, 2014). Accordingly, Table 6, confirmed establishment of discriminant validity as HTMT ratio of correlation are well below the cut-off point of 0.85. Therefore, all items of the questionnaires were confirmed as reliable and valid for the studies which pave way for structural model evaluation.

Table 3: Construct Reliability and Validity Test

| Construct | Indicators | Loadings | Cronbach's | | |
|---------------------------------------|------------|----------|------------|-------|-------|
| | | | Alpha | CR | AVE |
| Management support | MS_1 | 0.807 | 0.684 | 0.802 | 0.507 |
| | MS_2 | 0.769 | | | |
| | MS_3 | 0.686 | | | |
| | MS_4 | 0.562 | | | |
| Professional Proficiency | PP_1 | 0.693 | 0.833 | 0.888 | 0.667 |
| | PP_2 | 0.864 | | | |
| | PP_3 | 0.882 | | | |
| | PP_4 | 0.815 | | | |
| Internal Audit Function Effectiveness | IAFE_1 | 0.784 | 0.898 | 0.919 | 0.587 |
| | IAFE_2 | 0.780 | | | |
| | IAFE_3 | 0.714 | | | |
| | IAFE_4 | 0.811 | | | |
| | IAFE_5 | 0.633 | | | |
| | IAFE_6 | 0.794 | | | |
| | IAFE_7 | 0.790 | | | |
| | IAFE_8 | 0.808 | | | |

Source-Field Data 2019

Table 4: Fornell-Larcker -Discriminant validity Criterion Test

| Latent Variable Correlation(LVC) | IAF | PP | MS | Discriminant Validity Achieved? (Square root of AVE>LVC) |
|--|-------------|-------------|----|--|
| Internal Audit Function Effectiveness (IAFE) | 0.76 | | | YES |
| Professional Proficiency (PP) | 0.72 | 0.81 | | YES |

| | | | | |
|-------------------------|------|------|-------------|-----|
| | 5 | 7 | | |
| | 0.45 | 0.46 | 0.71 | |
| Management Support (MS) | 9 | 1 | 2 | YES |

Source: Field Data 2019

Table 5: Cross-Loading - Discriminant Validity Criterion test

| Indicators | Internal Audit Function Effectiveness (IAFE) | Professional Proficiency (PP) | Management support (TMS) |
|------------|--|-------------------------------|--------------------------|
| IAFE_1 | 0.784 | 0.649 | 0.370 |
| IAFE_2 | 0.780 | 0.592 | 0.307 |
| IAFE_3 | 0.714 | 0.472 | 0.341 |
| IAFE_4 | 0.811 | 0.529 | 0.391 |
| IAFE_5 | 0.633 | 0.536 | 0.138 |
| IAFE_6 | 0.794 | 0.578 | 0.507 |
| IAFE_7 | 0.790 | 0.544 | 0.421 |
| IAFE_8 | 0.808 | 0.514 | 0.297 |
| MS_1 | 0.429 | 0.538 | 0.807 |
| MS_2 | 0.364 | 0.312 | 0.769 |
| MS_3 | 0.210 | 0.130 | 0.686 |
| MS_4 | 0.228 | 0.188 | 0.562 |
| PP_1 | 0.410 | 0.693 | 0.312 |
| PP_2 | 0.632 | 0.864 | 0.443 |
| PP_3 | 0.662 | 0.882 | 0.420 |
| PP_4 | 0.622 | 0.815 | 0.322 |

Source: Field Data 2019

Table 6: HTMT Ration of Correlation

| Construct(Latent Variable) | Internal Audit Function Effectiveness | Professional Proficiency |
|-------------------------------|---------------------------------------|--------------------------|
| Professional Proficiency (PP) | 0.820 | |
| Management Support (MS) | 0.547 | 0.537 |

Source: Field Data 2019

4.2.Evaluation of the inner structural model of study.

Structural model was checked for coefficient of determination(R²), path coefficient(Beta-Value), t-statistics,p-values and predictive relevance(Q²) as per guidelines by Hair Jr. et al., (2017).

4.2.1.Measuring the coefficient of determination (R²).

R² measure goodness of fit of how well the observed data fit the hypothesized model (Wooldridge, 2016). Accordingly, R² measured explanatory power of exogenous variable on endogenous variable therefore it shows effect size and predictive accuracy of the model (Sarstedt, Ringle, & Hair, 2017a). According to Figure 2, R² of the study is 0.545, implying that management support and professional proficiency in unison as exogenous variables explained 54.5% variation in the IAF effectiveness, an endogenous variable. Cohen, (1988) provides that r² value is considered as 0.02(weak), 0.13 (moderate) and 0.26 (substantial). Therefore, the study R² value of 0.545 is considered as substantial.

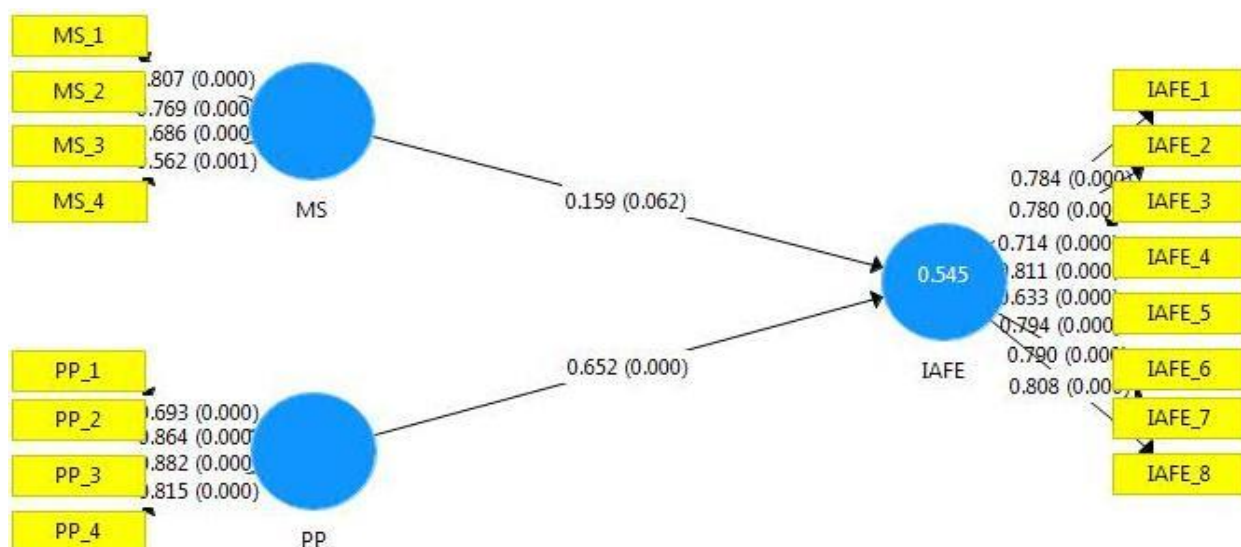


Figure 2: Assessment of Structural Equation Model

4.3.2. Evaluation of path coefficient (beta –Values).

The path coefficient of the structural model is akin to multiple regression beta values which shows a change of dependent variable as a result of a unit change of an independent variable keeping other variables constant to zero (Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). Therefore, the path coefficient is used in hypothesis testing of the study. The hypotheses were tested for strength, direction and level of significance of the coefficient of the latent variable in the inner model. Significance path coefficient was tested through non-parametric bootstrapping method to find the level of precision of PLS-SEM estimates (Chinn, 1998). A complete bootstrapping with minimum size of 5,000 subsamples, was done in Smart PLS-SEM, bias correlated, with standardized scores, no sign change and two tailed test at 0.05 level of significant (Hair et al., 2011; Henseler et al., 2016). The positive path coefficient with p-values equal to or less than 0.05, with a critical value higher than 1.96 support hypothesis acceptance (Hair.Jr, Hult, Ringle, & Sarsdtedt, 2013).

Table 7: Structural Estimates (Hypothesis testing)

| Hypothesis | Beta | T Statistics | P Values | Q ² | Decision |
|---|-------|--------------|----------|----------------|---------------|
| H1: Professional Proficiency -> Internal Audit Function Effectiveness | 0.652 | 8.775 | 0.000 | 0.301 | Supported |
| H2: Management support -> Internal Audit Function Effectiveness | 0.159 | 1.874 | 0.061 | 0.301 | Not supported |

Source-Field data 2019: Note: $p < 0.05$ (Two tailed) t-statistics value > 1.96

A completed structural model with beta values, t-statistics and probability values is reported in Table 7. In regard to significant, professional proficiency was found significant predictor of IAF effectiveness while management support was non-significant as a predictor of IAF effectiveness at 5% level of significance. Therefore hypothesis one (H1) is accepted while H2 is rejected.

Evaluation of predictive relevance (Q²).

Finally, predictive relevance of the model was checked through blindfolding which revealed a value of 0.301 as per Table 7 confirming median predictive relevance of the model as it is greater than zero. Hair, Risher, Sarstedt, & Ringle, (2019) provide a rule of a thumb that Q² in range of 0, 0.25 or 0.50 depicts small, median and large predictive relevance of PLS-SEM path model respectively.

5. DISCUSSION OF FINDINGS

According to Table 7, hypothesis one (H1) is supported as t-statistic was 8.775 above set criterion of 1.96 and p-value was 0.000 below set criterion of 0.05. Therefore H1 is accepted that professional proficiency positively and statistically significantly determines IAF effectiveness of listed companies in Tanzania. The results are similar to studies done in IAF arena (Chevers et al., 2016; Elmghaamez & Ntim, 2016; Endaya & Hanefah, 2016; Fekadu, 2018; Vadasi et al., 2020). However, the study results contradicted other studies which found not a significant factor (A. Cohen & Sayag, 2010; Poltak, Sudarma, & Purwanti, 2019).

The results support institutional theory that in less developed countries where IAF is scarcely understood, professionalism of internal auditors establish a professional identity that institutionalizes its practices in the organization to attain effectiveness (Gramling, Nuhoglu, & Wood, 2013).

In Tanzania context, IAF is a recent phenomenon which requires external pressure through professionalism of internal auditors professional standards and practices to showcase value addition in the organization hence effectiveness in the company (Vadasi et al., 2020). However, the study results signified an organizational- professional conflict where internal auditors embrace their professional norms to be effective (Cohen & Sayag 2010). This showed that professional internal auditors can be effective irrespective of organizational members support which depict infancy of the profession in the Tanzania situation (Ramachandran et al., 2012). Therefore, an effective internal function of DSE listed companies in Tanzanian context should possess pertinent knowledge of the business operations, professional certification, technical

competence and lastly compliance with international standards of internal auditing in execution of its responsibilities to be effective.

Based on Table 7 again, the results did not support hypothesis two (H2) as t-statistics was 1.874 below set benchmark of 1.96 and p-value was 0.061 above set criterion of 0.05. Therefore, hypothesis two is rejected that management support is not a significant determinant of IAF effectiveness of listed companies in Tanzania. The result concurred with Jiang et al., (2018) that top management embraces ineffective IAF so as to avoid rigorous scrutiny to act opportunistically to benefit from the company resources at the expense of the shareholders. The result also concurred with Al-Twaijry et al., (2003) that in a less developed corporate governance practices, IAF is not trusted by management and auditee as it is construed as a policing function hence it lacks organizational independence and support to be effective.

The results again negated the assertion that management makes IAF effective as it set it with an objective in mind to be effective (Azzali & Mazza, 2018). The study result further negated empirical findings of other researchers that management support is a cornerstone of IAFE that facilitate other factors like organizational independence, employing sufficient competent staff and support IAF with appropriate training and development and establishing an effective audit committee are all decisions that depend on management commitment (Alkebsi & Aziz, 2017; Alqudah et al., 2019; Alzeban & Gwilliam, 2014a; Cohen & Sayag, 2010; Dejnaronk et al., 2015; Endaya & Hanefah, 2016; Lenz & Hahn, 2015; Thi & Huong, 2018).

Chevers et al. (2016) assert that management commitment for change as a result of visionary thinkers make internal audit function effectiveness which the current study refuted. However, the study was in agreement with findings of Fekadu (2018) and Mustika, (2015) who established that though management support is necessary but it is not the dominant factor that influences internal audit function effectiveness. Since the establishment of IAF in the listed companies in Tanzania is a statutory requirement, management put them in place as a symbolic role and not as an effective function to add value to the firm.

It is also contended that IAF can be effective only if management has interest and dedication to make it effective (Carey, Simnett, & Tanewski, 2000). Ramachandran et al., (2012) confirmed that establishment of IAF in commercial banks in Tanzania was as a result of Bank of Tanzania mandatory requirement and therefore their existence was to do statutory role of compliance and monitoring mechanism and not risk based auditing to add value to the stakeholders. This also marries with Nicodemus, (2010) assertion that IAF roles are not appreciated as people still hold the old notion that are company police, therefore its establishment was not as a result of management liking. This evidenced that IAF in DSE listed companies in Tanzania is not effective as they were statutorily required by CMSA. Poltak et al., (2019) alluded non significant of management support to internal audit function effectiveness as general support which is limited to rules and standards and not of high commitment to impact effectiveness of internal audit function.

Similarly, it is also found that management as a key stakeholder of IAF are forced to put the function in place to abide with capital markets regulatory requirements which render the function ineffective as it lacks management support as a consequence (AL-Shetwi Mohammed, Ramadili, Chowdury, & Sori, 2011). Cohen & Sayag, (2010) likened these phenomena to an organizational-

professional conflict where IAF struggles to attain effectiveness through professionalism as a result of lack of management/organizational members support which bring tension in the company.

Moreover, the study results were perplexing as it thought that for highly regulated sectors, high level of management support was expected for IAF as most of the listed companies in Tanzania are banks and financial institutions which are associated with high risks and are highly regulated (Narayanaswamy, Raghunandan, & Rama, 2018). Therefore internal institutional pressures were not supported as a driver of IAF effectiveness. That internal processes, resources, relationship and organizational aspects which are a result of management support to IAF were not driving force for IAF effective in the context of Tanzania listed companies.

Contribution of this study is on theoretical and empirical aspects. Theoretically, the study support institutional theory that internal pressures and external pressures determine IAF effectiveness but results are context specific. Empirically, the study contribution is that the tension for IAF effectiveness can be astutely handled by the profession itself as management of listed companies in Tanzania established it to meet mandatory requirement by the Capital Markets and Security Authority (CMSA). It is also empirically revealed that society is still holding the old notion that IAF is a policing function rather than value adding one hence institutionalization of the professional norms is important for its effectiveness. Therefore this study adds to few literatures on IAF effectiveness especially in less developed economies where the profession is scarcely known by society.

6. CONCLUSION

The study aimed to investigate the determinants of internal audit function effectiveness of listed companies in Tanzania. Hypotheses were extracted from institutional theory where internal forces and external forces hypothesized to influence IAF effectiveness. Professional proficiency through professionalism of IAF was hypothesized as external pressure that drives effectiveness of the IAF which was proven empirically significant by the study. However, management support was hypothesized as internal pressure that determines IAF effective which was disapproved by the findings of this study.

This phenomenon is unique to the less developed countries like Tanzania where corporate governance is at infancy stage and IAF as a profession is not well appreciated by the organization members' management. The study contributes to practitioners of internal audit that professionalism is paramount in economies where the profession of IAF is less understood hence to be effective IAF have to be institutionalized in the organization by establishing professional identity of the function to be effective.

The study also extends debate on internal auditing research that internal pressure and external pressure drive IAF effective but they are context specific especially in less developed and developed economies. It also helps internal audit profession to position themselves strategically to advocate compliance of the standards to drive effectiveness in their companies. Lastly, management of listed companies, board of directors, audit committee members and their regulators in order to strengthen IAF in Tanzania should insist in compliance with international standards for professional practices of internal auditing for it to be effective.

The study as other studies in social science is not without limitations for generalization to other companies not listed on DSE in Tanzania. The empirical results based on 92 respondents from 19 listed companies in Tanzania analysed through non-parametric statistical tool of Partial least square structural equation modeling path analysis. Hence the same study is recommended in a wider population involving many companies in Tanzania and beyond. Equally, the study findings might be skewed towards involuntary formed IAF to abide with listing requirements on DSE bourse. Therefore a study is suggested for voluntary installed IAF to test the model of this study in various settings. Lastly, the study rests on institution theory as bedrock for informing IAF effectiveness regarding Tanzania listed companies. A study is recommended to apply the same theory in effectiveness of out-sourced IAF.

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