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Does Audit Committee Competence Moderate The Relationship Between Board Of Directors' Attributes And Financial Sustainability? Evidence From Municipalities In Ghana

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Abstract

The study aimed to establish the moderating effect of audit committee competence on the relationship between board of directors' attributes and financial sustainability of municipalities. The study used a survey approach and census balanced panel data design. The pri[1]mary data using structured questionnaire was distributed to 621 chief audit executives and board of directors and audit committee chairpersons in 207 out of the 260 municipalities. The study sampled observations for a five-year period (from 2016 to 2020) with 1035 observations for 207 municipalities. Data collected were analysed using partial least square-structural equation modelling. The findings indicated that all the variables (board size, board independence, board gender diversity, and audit committee competence) have a direct significant relationship with financial sustainability. The findings also showed that audit committee competence significantly moderates the relationship between board gender diversity and financial sustainability. However, audit committee competence does not have a significant moderating effect on the relationship between board size, board independence and financial sustainability.

Keywords: *Audit committee competence, board size, board independence, board gender diversity, financial sustainability,*

1. INTRODUCTION

Municipalities around the world are facing financial sustainability challenges, including those in Ghana (Yeboah & Andrew, 2020; Puopiel & Chimsi 2016; Huang & Ho, 2013; Huang & Ho, 2013). Despite regulatory reforms, these municipalities struggle to generate enough internal revenue to cover their expenses and continue delivering services to their citizens (Yeboah & Andrew, 2020; Buallay, 2018; Republic of Ghana, 2018b). The literature suggests that audit committees and boards of directors or municipal councils can contribute to improving the financial sustainability of these organizations (Hazzaa et al. 2022; Gal & Akisik, 2020; Munoz, 2005; Bhasin, 2016; IFAC, 2014; Hazzaa et al., 2022; Gal & Akisik, 2020).

Financial sustainability for municipalities means their ability to generate enough internal revenue to meet their expenses and continue providing services to the local community (Hazzaa et al. 2022; Gal & Akisik, 2020; Munoz, 2005; Bhasin, 2016; IFAC, 2014; Hazzaa et al., 2022; Gal & Akisik, 2020). When municipalities can generate sufficient funds for these purposes, they are considered financially sustainable. However, many municipalities, including those in Ghana, face financial unsustainability due to their inability to increase their internally generated revenue (Yeboah & Andrew, 2020; Buallay, 2018; Republic of Ghana, 2018b). Financial sustainability is crucial for municipalities because it determines their ability to raise funds internally and deliver services

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consistently. If municipalities are not financially sustainable, it can compromise the level and quality of service delivery (Hazzaa et al. 2022; Gal & Akisik, 2020; Munoz, 2005; Bhasin, 2016; IFAC, 2014; Hazzaa et al., 2022; Gal & Akisik, 2020).

The source of funding for municipalities in Ghana has become a pressing issue. The inability of these municipalities to raise adequate funds internally has negatively impacted their service deliveries (Yeboah & Andrew, 2020; Buallay, 2018; Republic of Ghana, 2018b). To achieve financial sustainability and continue providing services to their communities, municipalities require the support of audit committees and boards of directors. An effective relationship between these two entities is essential to enhance internal corporate governance (Hazzaa et al. 2022; Gal & Akisik, 2020; Khan & Ali, 2017; Munoz, 2005; Bhasin, 2016; IFAC, 2014; Hazzaa et al., 2022; Gal & Akisik, 2020). However, despite having the mandate to raise funds internally, Ghanaian municipalities have not seen an increase in their internal revenue collection in recent years (Yeboah & Andrew, 2020; Buallay, 2018; Republic of Ghana, 2018b). Prior studies recommended for further studies to address the financial unsustainability of municipalities (Honadle, 2003; Ferreira & Marques, 2014; Carmeli et al., 2008; Park, 2004; Pina, Torres & Royo 2010; Guillamón, Bernardino & Bastida 2011; Dumay, Guthrie & Farneti 2010; Guthrie & Farneti 2008; Khola Weissert & Kleine 2005; Zafra, López & Bastida 2009; Inceu, Mara, Lungu & Zai 2011; Pirtea, Nicolescu & Mota 2013; Arunachalam et al 2017; Dollery et al., 2011). Despite these research attempts and financial sustainability campaigns, no study has investigated how audit committee competence and board of directors' attributes can support the financial sustainability of municipalities. Therefore, studying whether audit committee competence can strengthen the relationship between boards of directors' attributes for municipalities to be financially sustainable is imperative.

2. THEORETICAL JUSTIFICATIONS

In corporate governance, the main role of boards of directors is to govern the organisation by creating strategic goals, policies, selecting, reviewing, and appointing the chief executive officers, making sure the adequate availability of financial capital, carrying out budget approval, providing accountability to the communities, and ensuring that the financial performance of the organisation is improved (Hazzaa et al., 2022; Agyemang & Bardai, 2022). However, creating an effective board of directors depends on the attributes of the board of directors in order to safeguard the interest of stakeholders. Boards of directors' attributes (board size, board independence and board gender diversity) are considered as the best measures of interenal corporate governance (Arora & Sharma 2016; Machuki & Rasowo 2018). The board size, board gender diversity and board independence are among the essential attributes of the board of directors that can safeguard the interest of stakeholders (Hazzaa et al 2022:1; ; Michelberger 2016). Due to financial failures of organisations, boards of directors have now gained the attention of regulators, researchers and governance reforms (Kamal et al 2021: 5; Adams, Hermalin & Weisbach 2010; Omer & Al-Qadasi 2020: 477; Puni & Anlesinya 2020). The board of directors is one of the important internal control mechanisms used to boost the public confidence about the credibility and the objectivity of financial reports, and protect the rights of the communities (Kamal et al 2021; Almutairi & Quttainah 2020; Almujamed & Alfraih 2020).

Prior studies have established that the audit committee plays a critical role in monitoring the policies of organisations (Qeshta, Alsoud, Hezabr, Basel, Ali & Oudat 2021; Qeshtaa & Ali 2020). From the agency theory perspective, the oversight role of audit committee is an instrument to protect the interest of stakeholders by providing assurance on good governance (Coetzee & Erasmus, 2020; Al-Rassas & Kamardin, 2016). Similarly, audit committees help prevent agency problems from arising (Trotman & Trotman ,2015). The board of directors and management (agents) may benefit from the municipalities, which minimise the interest of stakeholders (communities) who are the principals. This conflict of interest is attributed to information asymmetry (Koutoupis & Bekiaris, 2019). The presence of audit committees helps to minimise such conflict of interest by ensuring transparency in financial reporting and enhancing financial performance (Qeshta et al 2021; Ali & Oudat 2020).

Audit committees are expected to be competent in order to eliminate any fraudulent acts that may arise and to take financial decisions (Ghaemi, Moradi & Alavi, 2020). Consistent with the agency theory, an audit committee is an additional mechanism that makes sure that the stakeholders are safeguarded (Samaha & Khlif, 2016). The audit committee is a mechanism that ensures that the monitoring and communication between management and the board of directors are enhanced (Agyemang, 2020; Afsharian & Ahn, 2017).

From the perspective of agency theory, large boards (Edia & Jessica, 2020; Hu & Loh 2018; Akbas 2016), independent non-executive directors (Abdelbadie & Salama 2019; Rubino & Napoli 2020; Abdelbadie & Salama 2019), women on boards (Ahmadi, Nakaa & Bouri 2018; Kakabadse Figueira, Nicolopoulou, Hong Yang, Kakabadse & Özbilgin 2015); and competent audit committees (Omesi & Appah, 2022:1; Appah & Tebepah 2020; Januarti et al., 2020) can monitor and advice management to alleviate agency cost, which will result in improvement in financial sustainability. From the perspective of resource dependency theory, large board (Rubino & Napoli 2020; Wang et al 2020; Al-Bassam et al 2018), independent non-executive directors on boards(Cuervo–Cazurra et al., 2019; Rubino & Napoli, 2020), women directors(Wang, Holmes, Oh & Zhu 2016; Farrag & Mallin, 2016; Sheikha et al., 2021), and competent audit committees (Legodi, 2020; Hornberger & Forster, 2019) can bring to the boardroom diverse perspectives, skills, experience, networks, qualifications and knowledge and link the municipalities to the external financial resources, which in turn will enhance the financial sustainability of municipalities. Based on the assumptions related to agency and resource dependence theories, this study expected that audit committee competent can strengthen the board of directors attributes to determine the financial sustainability of municipalities.

3. EMPIRICAL REVIEW AND HYPOTHESES DEVELOPMENT

3.1 The relationship between board size and financial sustainability

Prior studies have reported no relationship between board size and financial performance. Prior studies conducted by Al-Matari and Mgammal (2019), Alshetwi (2017), as well as VO and Nguyen (2014) uncovered that there is no relationship between board size and financial sustainability. Also, prior studies have reported significant relationship with board size and financial sustainability. Prior studies have reported significant relationship with internal auditor independence and financial performance. Prior studies conducted by Johl et al (2015), Okoye et al. (2017), Muhammad et al (2016), as well as Boubacar (2018) uncovered that there is a significant relationship between board size and financial sustainability. Furthermore, prior studies have reported insignificant relationship with board size and financial performance. Prior studies conducted by Saha et al. (2018), andNguyen et al. (2015) (2016) uncovered that there is an insignificant relationship between board size and financial sustainability. Therefore, on the basis of the agency and resource dependency theories and the contradictory findings in the literature, this study formulated and tested the following hypothesis:

H1: There is a significant relationship between board size and financial sustainability of MMDAs.

3.2 The relationship between board independence and financial sustainability

Prior studies have reported no relationship between board independence and financial performance. Prior studies conducted by Johl et al. (2015), Alshetwi (2017), as well as Rashid (2018) uncovered that there is no relationship between board independence and financial sustainability. Also, prior studies have reported significant relationship with board independence and financial sustainability. Prior studies have reported significant relationship with board independence and financial performance. Prior studies conducted by Ntim (2011), Khumalo (2011), Kanakriyah (2021), Ghasemi and Ab Razak (2016), as well as Alqatan et al (2019: 1) uncovered that there is a significant relationship between board independence and financial sustainability. Furthermore, prior studies have reported insignificant relationship with board independence and financial performance. Prior studies conducted by Al-matari et al. (2012), Singla and Singh (2019), as well as Okoye, Erin, Ahmed and Areghan (2017) uncovered that there is an insignificant relationship between board independence and financial sustainability. Therefore, on the basis of the agency and resource dependency theories and the contradictory findings in the literature, this study formulated and tested the following hypothesis:

H2: There is a significant relationship between board independence (independent non-executive directors on board) and financial sustainability of municipalities.

3.3 The relationship between board gender diversity and financial sustainability

Prior studies have reported no relationship between board gender diversity and financial performance. Prior studies conducted by Marinova et al. (2016), as well as Hassan and Marimuthu (2018) uncovered that there is no relationship between board gender diversity and financial sustainability. Also, prior studies have reported significant relationship with board gender diversity and financial sustainability. Prior studies have reported significant relationship with board gender diversity and financial performance. Prior studies conducted by Kanakriyah (2021), Mahmood et al. (2018), Fariha, Hossain and Ghosh (2021), Fernández and Tejerina (2020), as well as Dwaikat et al. (2021) uncovered that there is a significant relationship between board gender diversity and financial sustainability. Furthermore, prior studies have reported insignificant relationship with board gender diversity and financial performance. Prior studies conducted by Ionascu et al. (2018), Lango (2018), as well as Sanyaolu et al. (2017) uncovered that there is an insignificant relationship between board gender diversity and financial sustainability. Therefore, on the basis of the agency and resource dependency theories and the contradictory findings in the literature, this study formulated and tested the following hypothesis:

H3: There is a significant relationship between board gender diversity (women on board) and financial sustainability.

3.4 The moderating effect of audit committee competence

The role of an audit committee covers the overall process of corporate reporting. The members are responsible for overseeing financial reporting and disclosure, for selecting external auditors, for reception of both external and internal audit results, and for solving disputes between auditors and management. These rules require audit committees to have in-depth accounting and auditing knowledge, in order to improve compliance with regulatory requirements and the understanding of financial reporting. The board of directors plays a central role in the monitoring procedure of financial sustainability (Richardson, Grantley & Roman, 2013). Baxter and Cotter (2009) stressed that this attribute is essential for audit committee members to perform their task effectively and efficiently. Nevertheless, knowledge and experience are needed like in any endeavourr, because one cannot give what one does not have (Bamahros, 2021). Mazibuko (2013) indicated that the interactions between audit committee and board of directors in municipalities can have a significant positive impact on revenue collection through the actions of planning, implementation and oversight of their operations which, in turn, enhance the financial sustainability of municipalities.

3.5 Audit committee competence and financial sustainability

Audit committee competence is considered as one of the significant attributes and determinants of audit committee effectiveness (Al Lawati & Hussainey, 2020). Audit committees that involve at least one accounting and auditing expert have more interaction with their board (Raghunandan, Read & Rama, 2001). It is necessary that, in order for an audit committee to be effective, it should have at least one member who has an accounting and or auditing qualification. Prior studies have indicated that there must be at least one member who is financially literate on audit committees (Buallay, Hamdan & Zureigat, 2017; Bamahros & Wan-Hussin, 2015). Prior studies have reported no relationship between board independence and financial performance. Prior studies conducted by Bouaine and Hrichi (2019), Alshetwi (2017), as well as Baxter and Cotter (2009) uncovered that there is no relationship between board independence and financial sustainability. Also, prior studies have reported significant relationship with board independence and financial sustainability. Prior studies have reported significant relationship with board independence and financial performance. Prior studies conducted by Bahaa et al. (2019), Albedal et al. (2020), as well as Nasiri and Ramakrishnan (2020) uncovered that there is a significant relationship between board independence and financial sustainability. Furthermore, prior studies have reported insignificant relationship with board independence and financial performance. Prior studies conducted by Gunes and Atilgan (2016), as well as Glover-Akpey and Azembila (2016) uncovered that there is an insignificant relationship between board independence and financial sustainability. Competent audit committees can become the drivers for sustainable development policies such as financial sustainability as a result of their continuous interaction with the board of directors (Rehman, 2021; Rahayu & Rahayu, 2020). From the perspective of agency theory, audit committee members with accounting and or auditing qualification will be able to monitor and advice management to alleviate agency cost, which will result in improvement in financial sustainability (Omesi & Appah, 2022; Appah & Tebepah, 2020; Januarti et al., 2020). Based on the perspective of agency theory, competent audit committees (Omesi & Appah 2022; Appah & Tebepah, 2020; Januarti et al., 2020; Jensen & Meckling, 1976) lead to better monitoring and controlling of management, which in turn lead to improvement in financial sustainability. Also, based on the perspective of resource dependency theory, competent audit committees (Legodi, 2020; Hornberger & Forster, 2019) bring to the boardroom diverse perspectives, skills, experience, networks, qualifications, skills, ideas and knowledge for municipalities to make effective decisions to enhance financial sustainability. Therefore, on the basis of agency and resource dependency theories, the following hypotheses were formulated and tested:

H4: There is a significant relationship between audit committee competence and financial sustainability of municipalities in Ghana.

3.6 Audit committee competence moderating board size

Audit committee competence can strengthen board size to enhance financial sustainability of municipalities. A board of directors is responsible for making crucial decisions that impact the financial sustainability and long-term success of a municipality. Having audit committee members with accounting and or auditing qualifications means having members who possess the necessary knowledge and skills to effectively oversee financial reporting and auditing processes, ensuring accuracy, transparency, and compliance (Al Lawati & Hussainey, 2020; KPMG, 2017). Competent audit committee members bring their expertise to the table, providing valuable insights into financial risks and controls. Their high level of competence fosters trust among stakeholders and other community members. Therefore, a larger board with diverse perspectives ensures a wider range of opinions when financial sustainability decisions are being made. When audit committee members with accounting and or auditing qualifications collaborate with the large board, they significantly contribute to the overall improvement in financial sustainability of municipalities (Rehman, 2021; Rahayu & Rahayu, 2020). Therefore, audit committee competence enhances board size for improvement in financial sustainability, as they work hand in hand toward informed decision-making that secures a bright future for any municipality. Therefore, on the basis of agency and resource dependency theories, the following hypothesis was formulated and tested:

H5: Audit committee competence has a significant moderating effect on board size and financial sustainability of municipalities in Ghana.

3.7 Audit committee competence moderating board independence

Having a competent audit committee can really boost the independence of board of directors and ultimately improve financial sustainability (Rehman, 2021; Rahayu & Rahayu, 2020). When an audit committee is made up of individuals who possess accounting and or auditing qualifications, it brings a whole new level of expertise to the table (Al Lawati & Hussainey, 2020; KPMG, 2017). When it comes to board independence, having a competent audit committee ensures that there are individuals with sufficient knowledge and expertise in financial matters who can oversee the decision-making process. By having this competence within the audit committee, they are better equipped to challenge management's proposals and provide unbiased opinions on crucial matters such as financial reporting and compliance. This moderates board independence by reducing the risk of undue influence or conflicts of interest from management (Al Lawati & Hussainey, 2020; KPMG, 2017). In other words, a competent audit committee acts as the guardian angel of objectivity and transparency within the company, helping to maintain a healthy balance between the power of the board and its ability to make independent decisions in the best interest of stakeholders. Therefore, on the basis of agency and resource dependency theories, the following hypothesis was formulated and tested:

H6: Audit committee competence has a significant moderating effect on board independence and financial sustainability of municipalities in Ghana.

3.8 Audit committee competence moderating board gender diversity

Having a competent and diverse audit committee plays a crucial role in promoting gender diversity on corporate boards, particularly in terms of increasing women's representation. An effective audit committee is responsible for overseeing financial reporting and internal controls within an organization. When audit committee comprises individuals with accounting and or auditing qualifications, they will have deep understanding of corporate governance, risk management, and accounting principles, they can contribute to identifying qualified female candidates for positions on the board (Al Lawati & Hussainey, 2020; KPMG, 2017). By actively seeking out potential female board members who possess strong financial expertise and diverse perspectives, these competent audit committees are instrumental in breaking down barriers that have historically limited women's presence at the board level. Thus, audit committee competence can act as a driving force behind achieving greater gender diversity within municipalities. By having accounting and or auditing group of individuals on audit committee, including women with relevant expertise, it ensures that different perspectives are taken into account when making financial sustainability decisions (Rehman, 2021; Rahayu & Rahayu, 2020). This diversity of thought can lead to more comprehensive discussions, better risk assessment, and ultimately stronger financial sustainability for the municipalities. Therefore, on the basis of agency and resource dependency theories, the following hypothesis was formulated and tested:

H7: Audit committee competence has a significant moderating effect on board gender diversity and financial sustainability of municipalities in Ghana.

4. METHODOLOGY

The study used panel data. Panel data is data sets which consist of multiple observations on each sampling unit (Baltagi, 2001). Baltagi (2001) indicated that panel data gives the researcher a large number of data points by combining both cross section and time series. The study sampled observations for a five-year period (from 2016 to 2020). The study with 5 years observations for 207 MMDAs had a total of 1035 observations which is better as compared to only 207 observations if a time series analysis is selected. The main purpose of using panel data is to increase the number of observations. Therefore, with 5 years of time series data coupled with 207 municipalities, is assumed to provide the study with a rich input from 1035 observations.

Data analysis was performed by using Smart Partial Least Square Structural Equation Modelling (SPLS-SEM version 4). Data received from the questionnaire (from both online and hard copy) was cleaned, sorted and coded in an excel sheet and directly transferred into

SPSS, which was later saved in an excel sheet and transferred to SPLS-SEM 4 software for analysis. As such, the data was freed from coding errors. Nevertheless, a careful and detailed check against the survey instrument was made to ensure the accuracy of the transferred data. The study aimed to establish the relationship between audit committee, internal auditors and board of directors' attributes and financial sustainability of municipalities. The model was developed on structural equation modelling partial least square based on the construct generated from the agency and resource dependency theories. SPLS-SEM has two parts that are measurement model which relates indicators to their respective latent variables and structural model which relates latent variables against another latent variable (Massawe et al., 2020; Henseler, Hubona & Ray, 2016). The structural model included audit committee competence, board of directors' attributes and financial sustainability variables extracted from both agency and resource dependency theories. The measurement model was checked for achievement of quality criteria of construct reliability and construct validity (HairJr, Howard & Nitzl, 2020; Massawe et al., 2020). Construct reliability or internal consistency was checked using composite reliability and Cronbach alpha (Hair Jr. et al., 2020; Massawe et al., 2020) whilst the construct validity was measured by both convergent validity and discriminate validity (Massawe et al., 2020; Pallant, 2011). The structural model was checked for coefficient of determination (R^2), path coefficient (Beta-Value), t-statistics, p-values and predictive relevance (Q^2) (Hair Jr. et al 2020; Massawe et al 2020). All the latent (independent) and moderating variables were measured with five items. This implies each construct was measured with five (5) items. This is in accordance with similar study conducted by Agyemang and Yensu (2018), Agyemang (2017), Agyemang, Wingard and Acheampong (2019).The Table 2 below gives the definition and measurement of the variables used in the study.

Table 1: Operationalization and measurements of latent variables

Definition of latent variables (Dependent variable)	**Measurement of latent variables**	**Data source**
Financial sustainability (endogenous latent). It is defined as the internal revenue generation performance of MMDAs. In this study, financial sustainability and financial performance are used interchangeably.	Financial sustainability was measured by average score of 5 measurement items on a 5- point Likert Scale on each proxy: 1. **Net surplus margin ratio**: It was measured as total internally generated revenue less total expenses divided by total internally generated revenue; 2. **Net cash flow from operations to total debt ratio**: It was measured as the net cash flow from operations (i.e. internally generated revenue less operating expenses) divided by the total debt; 3. **Rates coverage ratio**: It was measured as total internally generated revenue divided by total expenses; 4. **Rates revenue to total revenue ratio**: It was measured as the total internally generated revenue divided by the total revenue or income; and 5. **Asset turnover ratio**: It was measured as the total internally generated revenue divided by the total assets.	Secondary data.
Definition of latent variables (independent variables)	**Measurement of latent variables**	**Data source**

Board Size (exogenous latent): It is defined as the total number of directors on the board.	Board size was measured by average score of 5 measurement items on a 5-point Likert Scale on board size.	Questionnaire
Board independence (exogenous latent). It is defined as the percentage of independent non-executive directors on a board.	Board independence was measured by average score of 5 measurement items on a 5- point Likert Scale on board independence.	Questionnaire
Board gender diversity. It is defined as the percentage of women on a board.	Board gender diversity was measured by average score of 5 measurement items on a 5- point Likert Scale on board gender diversity. Board gender diversity is where the board member is a woman or female.	Questionnaire
Definition of latent variables (moderating variables)	**Measurement of latent variables**	**Data source**
Audit committee competence (exogenous latent). It is defined as the percentage of audit committee members with accounting and or auditing qualification.	Audit committee competence was measured by average score of 5 measurement items on a 5- point Likert Scale on audit committee competence. Audit committee competence is where the audit committee member has accounting and or auditing qualification.	Questionnaire

5. RESULTS

5.1 Assessment of measurement model

The research model was assessed using a two-step process: one was the assessment of the measurement model; and, two the assessment of the structural model. The main aim of model validation was to determine whether both the measurement and the structural models meet the quality criteria for empirical research. The following subsections discuss the guidelines used in this study to assess both measurement and the structural model. The study also assessed the moderation or interaction relationship proposed in the model.

5.2 Reliability and convergent validity

This section of the study assessed the reliability and validity of each of the constructs used in the study. In assessing the reliability of the constructs, Cronbach's alpha, composite reliability (CR) and average variance extracted (AVE) were used. In assessing validity of the constructs, convergent and discriminant measures were used. Table 2 below shows the result of Cronbach's alpha and convergent validity for the second iterative confirmatory factor analysis (CFA) model. Also, Table 2 shows the factor loadings, results of composite reliability, Cronbach's alpha, and AVE for all the constructs. Figure 1 shows the factor loadings and path coefficients that were obtained from SPLS-SEM.

Table 2: Loadings, construct reliability and convergent validity

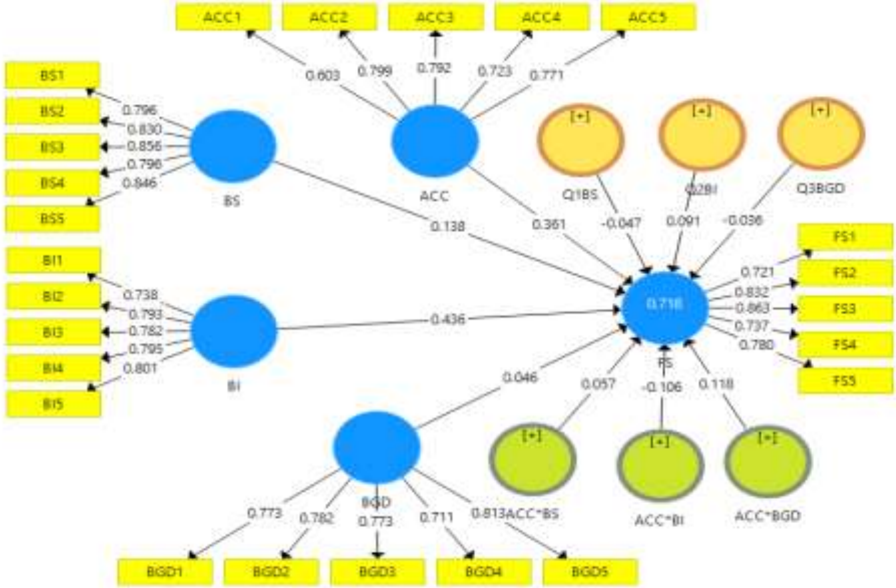
Items	**Outer Loadings**	**VIF**	**t-values**	**p-values**	**Crombach Alpha (CA)**	**Composite Reliability (CR) (rho_c)**	**Average Variance Extracted (AVE)**
ACC 1	**0.603**	**1.287**	14.319	0.000	**0.791**	**0.858**	**0.549**
ACC 2	**0.799**	**1.710**	41.030	0.000			

Items	**Outer Loadings**	**VIF**	**t-values**	**p-values**	**Crombach Alpha (CA)**	**Composite Reliability (CR) (rho_c)**	**Average Variance Extracted (AVE)**
ACC 3	**0.792**	**1.781**	35.846	0.000			
ACC 4	**0.723**	**1.545**	25.824	0.000			
ACC 5	**0.771**	**1.620**	34.846	0.000			
BGD 1	**0.773**	**1.745**	25.659	0.000			
BGD 2	**0.782**	**1.710**	29.850	0.000			
BGD 3	**0.773**	**1.698**	28.493	0.000	**0.829**	**0.880**	**0.594**
BGD 4	**0.711**	**1.539**	20.133	0.000			
BGD 5	**0.813**	**1.920**	42.142	0.000			
BI1	**0.738**	**1.682**	23.665	0.000			
BI2	**0.793**	**1.984**	31.057	0.000			
BI3	**0.782**	**1.735**	25.611	0.000	**0.841**	**0.887**	**0.612**
BI4	**0.795**	**1.820**	38.803	0.000			
BI5	**0.801**	**1.864**	34.923	0.000			
BS1	**0.796**	**1.919**	29.088	0.000			
BS2	**0.830**	**2.395**	37.794	0.000			
BS3	**0.856**	**2.552**	39.416	0.000	**0.883**	**0.914**	**0.681**
BS4	**0.796**	**2.109**	35.289	0.000			
BS5	**0.846**	**2.345**	51.679	0.000			
FS1	**0.721**	**1.558**	21.991	0.000			
FS2	**0.832**	**2.384**	47.783	0.000			
FS3	**0.863**	**2.684**	82.639	0.000	**0.846**	**0.891**	**0.622**
FS4	**0.737**	**1.684**	29.956	0.000			
FS5	**0.780**	**1.707**	33.033	0.000			

Measurement model

The measurement model of this study has forty five (45) latent constructs, as shown in Figure 1.

Figure 1: Measurement model indicating outer loadings



5.3 Assessment of factor loadings

In PLS-SEM, the first step is the assessment of a measurement model. In assessing the measurement model, reliability of the measurement scale for each construct was tested first. In assessing the reliability of each item, factor loadings of the indicators on each construct were checked. Factor loadings are numerical values that indicate the strength and direction of the relationship between observed variables and latent factors in a factor analysis model. Essentially, factor loadings give information about how much variance in each observed variable is accounted for by the corresponding latent factor. Assessing these factor loadings is crucial because it helps to understand the degree to which each observed variable contributes to the underlying construct. High loadings indicate a strong relationship, while low or negative loadings suggest weak or possibly even contradictory relationships. Additionally, assessing factor loadings helps to determine if any observed variables are not strongly associated with any latent factors, which can help to refine the measurement model. The rule of thumb of factor loadings according to Hair et al. (2019) is 0.708, indicating higher factor loading which explains that the factor extracts are sufficient variance from that variable. As per Table 2, all loadings, except for ACI were greater than 0.708. As a result, it is essential to validate the results of other measurement indexes for the constructs of these items.

5.4 Assessment of internal consistency

The study used composite reliability to assess the internal consistency of individual reliability. Composite reliability is a statistical measure used to evaluate the internal consistency and reliability of a composite or summated scale. It allows researchers to determine the extent to which multiple, interrelated items in a questionnaire or survey consistently measure the same construct. To calculate composite reliability, various factors are taken into account, including the average covariance between items, the average variance for each item, and their respective loadings onto a latent construct. This measure is particularly useful in research settings where it is important to ensure that the scale being used is reliable and consistent. A high composite reliability coefficient indicates strong internal consistency among the items within the scale, indicating that they are indeed measuring the same underlying construct reliably. In assessing the internal consistency of reliability, values ranging from 0.6 to 0.9 are considered best and value below 0.6 shows a lack of composite reliability (Hair et al., 2019). With reference to Table 2 above, the constructs show the high level of internal consistency in each construct with CR value greater than 0.7 for all constructs, indicating its reliability. Table 2 also shows the values of Cronbach alpha ranging from 0.791 to 0.841 which meets the required threshold of 0.70.

5.5 Assessment of convergent validity

The next step in the measurement model is to test the convergent validity that is reviewed by using the average variance extracted (AVE). Convergent validity is a concept within research methodology that allows researchers to assess the degree of agreement between two or more measures, aiming to determine whether they are measuring the same construct. Average variance extracted helps to figure out how well the measurement items are actually measuring what they are supposed to measure. Average variance extracted (AVE) comes into the picture by showing the amount of variation in the construct that is being captured by the items in the scale. If the AVE is high, it means the measurement items are doing well at tapping into the underlying construct. On the other hand, if the AVE is low, it suggests that the measurement items might be all over the place and not really capturing the essence of what is required to measure. For multi-item reflective constructs AVE values above 0.5 are considered to be representative of sufficient convergent validity (Hair et al, 2017; Fornell & Larcker, 1981). Convergent validity takes two measures that are supposed to be measuring the same construct and shows that they are related. As per Table 2 above, the results shows that all AVEs for each construct were greater than 0.5 which had a values ranging from 0.549 to 0.681. All the reflective constructs of the study model met the conditions for AVE and also show factor loadings above the recommended level of 0.5 (see indicator reliability section).

5.6 Assessment of discriminant validity using cross loadings criterion

The next step was to assess the discriminant validity. Discriminant validity refers to the ability of a measurement tool or questionnaire to differentiate between two constructs that should theoretically be distinct from one another. To assess this validity, researchers examine the pattern of correlations between items and constructs. If a measure has high discriminant validity, each item will primarily correlate with its own construct and only minimally with other constructs. Cross loadings occur when an item shows significant correlations with multiple constructs, suggesting a lack of distinction between those constructs. Discriminant validity was assessed using three criteria namely cross-loadings, Fornell-Larcker criterion and Heterotrait-Monotrait ratio (HTMT) (Hair et al., 2017). As per Table 3 below, the results show that all the items were correlated within their own theoretical construct and did not load well on the other constructs. This indicates that discriminant validity was not a problem in this study.

Table 3: Discriminant validity using cross loadings criterion

Items	**ACC**	**BGD**	**BI**	**BS**	**FS**
ACC1	**0.602**	0.280	0.366	0.352	0.452
ACC2	**0.798**	0.416	0.533	0.513	0.616
ACC3	**0.792**	0.354	0.503	0.416	0.542
ACC4	**0.724**	0.329	0.549	0.385	0.534
ACC5	**0.771**	0.346	0.483	0.441	0.568
BGD1	0.278	**0.773**	0.315	0.483	0.383
BGD2	0.418	**0.782**	0.403	0.596	0.450
BGD3	0.413	**0.773**	0.400	0.502	0.425
BGD4	0.316	**0.711**	0.330	0.403	0.369
BGD5	0.368	**0.813**	0.392	0.515	0.445
BI1	0.445	0.371	**0.737**	0.389	0.486
BI2	0.496	0.366	**0.793**	0.357	0.504

Items	ACC	BGD	BI	BS	FS
BI3	0.560	0.372	**0.782**	0.398	0.571
BI4	0.523	0.367	**0.795**	0.384	0.592
BI5	0.550	0.400	**0.801**	0.396	0.579
BS1	0.437	0.521	0.357	**0.795**	0.533
BS2	0.484	0.531	0.406	**0.830**	0.487
BS3	0.515	0.527	0.469	**0.856**	0.546
BS4	0.436	0.499	0.399	**0.797**	0.477
BS5	0.491	0.609	0.399	**0.846**	0.544
FS1	0.511	0.431	0.504	0.521	**0.714**
FS2	0.624	0.472	0.551	0.533	**0.830**
FS3	0.637	0.453	0.587	0.517	**0.863**
FS4	0.513	0.360	0.544	0.421	**0.741**
FS5	0.604	0.409	0.577	0.487	**0.784**

5.7 Assessment of discriminant validity using Fornell and Larker’s criterion

The next step was to assess discriminant validity using Fornell-Larcker criterion. The Fornell-Larcker’s (1981) criterion provides a robust method to assess discriminant validity by examining the correlations between different latent variables in a measurement model. According to their criterion, discriminant validity is achieved if the square root of the average variance extracted (AVE) for each construct is larger than its highest correlation with any other construct in the model. In simpler terms, it means that each construct should have more shared variance with its own indicators than with indicators of other constructs in the research model. This helps researchers establish confidence that they are indeed measuring distinct concepts and not overlapping or redundant factors. By using Fornell and Larker's criterion, researchers can ensure that their measurement instruments accurately capture different constructs, leading to more rigorous and reliable results. As per Table 3, the square root of the first-order reflective construct’s AVE is shown on the diagonal, indicating that the discriminant validity is established.

Table 4: Discriminant validity using Fornell and Larker’s criterion

	ACC	BGD	BI	BS	FS
ACC	**0.741**				
BGD	0.469	**0.771**			
BI	0.661	0.480	**0.782**		
BS	0.574	0.652	0.492	**0.825**	
FS	0.736	0.541	0.702	0.630	**0.788**

5.8 Assessment of discriminant validity using Heterotrait-Monotrait (HTMT) criterion

The next step was to assess discriminant validity using the HTMT criterion. Basically, this is a method used in research to determine whether a measure truly captures distinct constructs or if it's just measuring the same thing over and over again. By assessing the degree of correlation between two traits (Heterotrait) compared to the correlation within each trait (Monotrait), it can be seen if the measure is able to discriminate between various constructs or if it is just lumping them all together. If it is found that correlations between different traits are lower than correlations within each trait, then that suggests good discriminant validity. In other words, it helps to make sure it is not just measuring one thing in different ways but are actually capturing unique aspects of the variables. Henseler, Ringle and Sarstedt (2015) suggested the threshold of HTMT to be 0.90 whilst Hair et al (2019) also suggested a value below 0.85. In this study, the value obtained is still below the cut-off value which shows good evidence of validity (see Table 5).

Table 5: Discriminant validity using HTMT criterion

	ACC	BGD	BI	BS	FS
ACC					
BGD	**0.572**				
BI	0.805	**0.571**			
BS	0.683	0.757	**0.571**		
FS	0.896	0.642	0.829	**0.727**	

5.9 Assessment of structural model

The next step after the assessment of the measurement model is to assess the structural model. In assessing the structural model, the used SRMR as a goodness-of-fit (GoF), coefficient of determination (R^2), blindfolding and predictive relevance (Q^2) and effect size (f^2)to test the explanatory power of the model on the relationship between the exogenous and endogenous before the assessment of the path coefficients of the constructs. Table 5 shows the values of SRMR, coefficient of determination (R^2), effect size (f2) and the blindfolding and predictive relevance (Q^2). Table 5 also shows the results of PLS bootstrapping consisting of the Beta value, t-values, p-values, hypothesis results (whether accepted or rejected), whilst Figure 2 summarises the results of the structural model and PLS bootstrapping.

Table 6: Structural model's fit (SRMR), explanatory power and predictive relevance

Criterion	Estimate
SRMR	0.071
R^2	0.695
R^2 adjusted	0.692
Q^2	0.423

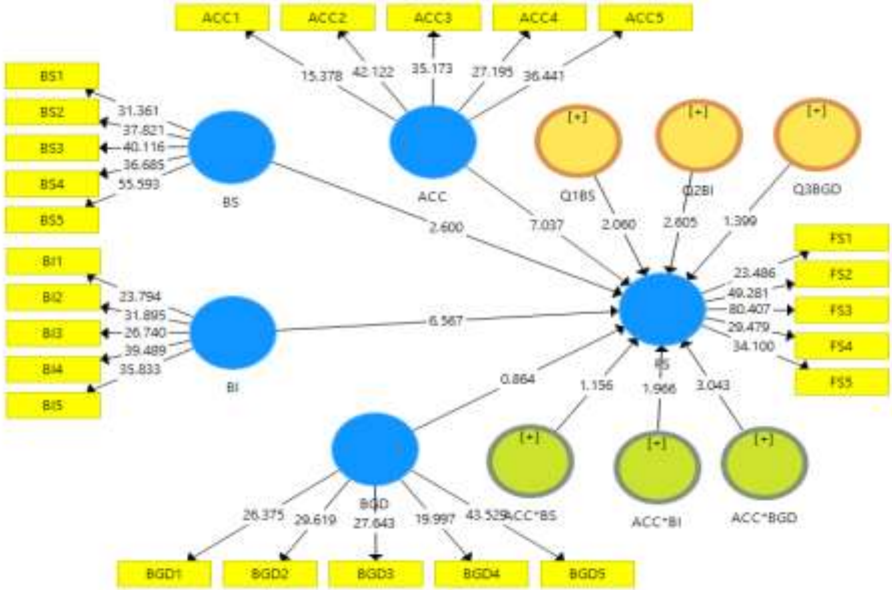
Table 7: Structural path coefficients results (direct and moderating)

Paths	B	SE	t-values	p-values	Confidence Interval (CI)		f^2
					2.5%	97.5%	
Direct effects							
BS -> FS	0.205	0.046	4.381	**0.000****	0.116	0.295	0.047
BI -> FS	0.284	0.053	5.210	**0.000****	0.188	0.388	0.123
BGD -> FS	0.152	0.046	3.468	**0.001****	0.069	0.241	0.033
ACC -> FS	0.397	0.061	6.515	**0.000****	0.294	0.518	**0.226**
Moderating effects							
ACC x BS -> FS	0.011	0.044	0.227	**0.820**	-0.088	0.083	**0.000**
ACC x BI -> FS	-0.039	0.062	0.684	**0.495**	-0.147	0.091	**0.006**

Paths	**B**	**SE**	**t-values**	**p-values**	**Confidence Interval (CI)**		**f²**
					2.5%	**97.5%**	
ACC x BGD -> FS	0.129	0.044	2.989	**0.003****	0.049	0.225	0.070

NB: **** = p<0.001; *** = p<0.01; ** = p<0.05; **** = p<0.10

Figure 2: Structural model indicating path results of direct and moderating effect



5.10 Assessment of the standardised root mean square residual (SRMR)

In order to assess the goodness of fit of the structural model, the study used SRMR goodness-of-fit (GoF) index. SRMR stands for Standardized Root Mean Square Residual and it measures the discrepancy between observed and predicted covariances in a structural equation model (SEM). This index gives information about how the model is doing at explaining the relationships between variables. A lower SRMR value indicates a better fit, meaning that our model matches up nicely with the data. Cho et al. (2020:189) indicated that SRMR value less than 0.08, 0.09 or between zero and 1 is considered a good fit. Table 5 above shows a SRMR value of 0.071 (< .08) indicating that the model is a good fit.

5.11 Assessment of the coefficient of determination (R^2)

The next phase is to assess the predictive accuracy of the model by using value of the coefficient of determination (R^2). Predictive accuracy using the coefficient of determination, commonly known as R2, is a crucial measure in assessing the quality of statistical models. R^2 ranges from 0 to 1, with values closer to 1 indicating a higher predictive accuracy. R^2 helps to understand how well the study model fits the observed data points and how much of the variation in the dependent variable it can explain. R^2 quantifies the proportion of variation in the response variable that can be attributed to the independent variables included in the model. Hair et al (2017) indicated that if R^2 is above 0.75 it is considered as substantial, if R^2 is above 0.50 it is considered as moderate, and if R^2 is above 0.25 it is considered as weak, and if R^2 is below 0.25 is considered as unacceptable. As per Table 5 above, the score of R^2 for all the variables is moderate as recommended by Hair et al (2017). All the variables used in the study had R^2 score of 0.695 indicating that the model can predict up to 69.5% of the variables influencing financial sustainability. This shows that each of these constructs is influenced by exogenous constructs with moderate criteria.

5.12 Assessment of the predictive relevance (Q^2)

The study used Q^2 to assess the predictive relevance. Q^2 is an essential tool to measure how accurately a model can predict outcomes. It stands for the second quartile or the median of the residuals, which are the differences between the actual values and predicted values. A lower Q^2 score indicates higher predictive accuracy as it means that on average, the model's predictions are closer to the true values. This metric helps to assess if the models used in the study are reliable and trustworthy in making future predictions. Hair et al. (2017) provided a standard score for Q^2. The authors indicated that if the $Q^2 > 0$, it means that the model has predictive relevance and if it is $Q^2 < 0$, it means the model lacks predictive relevance of the exogenous construct on the endogenous construct. Hair et al (2017) suggested that if the predictive relevance (Q^2) has values of 0.02, 0.15, and 0.35 respectively, it means that exogenous constructs have a small, medium, or large predictive relevance for an endogenous latent variable. With reference to Table 6, the Q^2 value of all the endogenous constructs was 0.423 which is above zero and considered as large indicating that the model has acceptable predictive power regarding the endogenous latent variables as recommended by Hair et al. (2017).

5.13 Assessment of the effect size (f^2)

The next stage is to assess the effect size of the model. Therefore, the study used f^2 to assess the effect size of the model. In assessing the effect size f^2 is normally used. The f^2 is used to quantify the impact of the independent variable on the dependent variable. The f^2 is a measure commonly used to assess this effect size in multiple regression analyses with more than one predictor variable. It shows how much variance in the dependent variable can be attributed to each specific independent variable. An f^2 value of 0.02 suggests a small effect, 0.15 indicates a medium effect, and anything above 0.35 signifies a large effect. So by calculating f^2, it is easy to understand the significance and magnitude of our independent variables' influence on the outcome accurately. To assess the effect size, the study followed a guideline set by Cohen (1988). Cohen (1988) indicated that if the value of f^2 is 0.02 it represents small effect, 0.15 represents medium effect, and 0.35 represents large effect. As indicated in Table 6 above, the following f^2 values are linked to H1 (0.047=small effect), H2 (0.123=small effect), H3 (0.033=small effect), Also, H4 (0.226 = medium effect), H5 (0.000 = no effect), H6 (0.006 = no effect), and H7 (0.033 = medium effect).

5.14 Assessment of the significance of the structural model relationships

After assessing the explanatory power of the structural model using SRMR, Q^2, R^2 and f^2, the next stage is to assess the significance between the exogenous constructs and the endogenous constructs. In SPLS-SEM 4, bootstrapping is used to assess the significance between the exogenous constructs and the endogenous constructs. Bootstrapping is all about getting reliable estimates even when the data is not normally distributed, and that is where SPLS-SEM 4 steps in. This tool uses resampling techniques to create multiple pseudo samples from our original dataset and then analyzes them to provide us with robust statistical values. It takes into consideration the non-parametric nature of the data and provides more accurate p-values, confidence intervals, and standard errors. In the bootstrapping, the study used a significance level of 0.05, a two-tailed test, and 1000 subsamples. The results of the direct effects are shown in the Table 7 above.

With regard to direct effect relationships, the Table 7 above shows the value of the path coefficients has a standardized value between -1 and +1 (Values from 0.14 to 0.485). Estimated route coefficients approaching +1 indicate strong positive associations, according to Hair et al. (2017), and the closer the number comes to zero, the weaker the relationships get. In the next step, in the direction of conducting the T-test, relationships are found to have T-values of more than or equal to 1.645. Therefore, all the hypotheses for direct effect relationships are significant at H1 ($\beta = 0.1205$, $p = 0.000$), H2 ($\beta = 0.284$, $p = 0.000$), H3 ($\beta = 0.152$, $p = 0.001$), and H4a ($\beta = 0.397$, $p = 0.000$) and therefore, accepted.

In order to assess the size of the moderating effect, the Kenny' (2018) guideline stated 0.005, 0.01 and 0.025 as the standards for small, medium, and large effects sizes respectively. Therefore, to obtain the significant of the moderating effect on the relationship between the exogenous and endogenous variables, the bootstrapping procedure was conducted. With reference to the Table 7 above, the interactions term of ACC*BGD (β = 0.129, p= 0.003) is significant and therefore accepted at 5% significant level. However, the interaction term of ACC*BS (β = 0.011, p= 0.820), ACC*BI (β = -0.039, p= 0.495), are insignificant, for the one-tailed test with a significant level of 0.05 and therefore rejected.

6. DISCUSSION

Hypothesis 1: There is a significant relationship between board size and financial sustainability of municipalities in Ghana. From the Table 5, the finding from SEM shows that there is a significant relationship between board size and financial sustainability of municipalities over the period covered in this study. Empirically, the finding from SEM supports Johl et al (2015: 239); Okoye et al. (2017); Muhammad et al. (2016) and Boubacar (2018) studies which reported a significant relationship between the board size (large board) and financial sustainability. From the theoretical perspective, this finding supports the agency theory's argument that large boards have the capacity to monitor and control management from their opportunistic interest which leads to the improvement in financial sustainability of MMDAs (Edia & Jessica, 2020; Hu & Loh, 2018; Akbas, 2016; Edia & Jessica 2020; Al-Bassam et al., 2018). This finding also supports the resource dependency theory which advocates that large board size enables the board members with diverse knowledge (resources) to deploy their resources for the improvement of financial sustainability of MMDAs (Rubino & Napoli, 2020; Wang et al., 2020).

Hypothesis 2: There is a significant relationship between board independence and financial sustainability. From the Table 5, the finding from SEM shows that there is a significant relationship between board independence and financial sustainability of municipalities. The finding from the structural equation model supports prior studies which reported a significant relationship between board independence (independent non-executive directors) and financial sustainability of municipalities (Kanakriyah, 2021; Ghasemi & Ab Razak, 2016; Ammari et al., 2016; Alhussayen & Shabou, 2016; Alqatan et al., 2019; Kapil & Mishra, 2019). This finding also supports agency theory which advocates that independent non-executive member on the board are able to monitor and supervise management effectively ((Abdelbadie & Salama, 2019; Rubino & Napoli, 2020; Abdelbadie & Salama, 2019). Similarly, the finding supports resource dependency theory which advocates that independent non-executive directors on boards could help improve financial sustainability due to their input for decision making such as investment and strategic planning decisions, and their networking value with the external environment and other stakeholders (Cuervo–Cazurra et al., 2019; Rubino & Napoli, 2020).The implication of this finding is that large proportion of independent non-executive directors on boards can improve financial sustainability of municipalities.

Hypothesis 3: There is a significant relationship between board gender diversity and financial sustainability. From the Table 5, the finding from SEM shows that there is a significant relationship between board gender diversity and financial sustainability of municipalities. In support of the findings from the structural equation model, prior studies reported a significant relationship between the number of women serving on boards (board gender diversity) and financial sustainability of municipalities (Johl et al., 2015; Fariha et al., 2021; Fernández & Tejerina, 2020; Dwaikat et al., 2021; Kanakriyah, 2021). The significant relationship found between board gender diversity and financial sustainability could be that from the perspective of agency theory, women on boards contribute a wider range of perspectives in decision-making, which increases the independence of the board while reducing agency costs and, as a consequence, the financial sustainability of the municipalities improves (Ahmadi et al., 2018; Kakabadse et al., 2015). Similarly, from the perspective of resource dependency theory, women directors brings knowledge, skills and experiences to their boards that differ from those of their male counterparts (Terjesen et al., 2009); have the ability to create linkages to different parties such as customers, suppliers, future employees or suppliers than men (Vob, 2017; Hillman, Shropshire & Canella, 2007) and are better community influential than men, which in turn improves financial sustainability (Wang et at., 2016; Farrag & Mallin, 2016; Sheikha et al., 2021; Hoobler et al., 2016).

Hypothesis 4: There is a significant relationship between audit committee competence and financial sustainability. From the Table 5, the finding from SEM shows that there is a significant relationship between audit committee competence and financial sustainability of municipalities. Empirically, this finding from the SEM supports Albedal et al. (2020); Elghuweel et al (2017); Nasiri and Ramakrishnan (2020); Ashari and Krismiaji (2020) as well as Shankaraiah and Amiri (2017) studies which reported a significant relationship between the audit committee competence and financial sustainability of municipalities. Theoretically, this finding supports the agency theory's argument that audit committee members with accounting and or auditing qualification have the capacity to monitor and control management from their opportunistic interest which leads to the improvement in financial sustainability of municipalities (Omesi & Appah, 2022; Appah & Tebepah, 2020; Januarti et al., 2020). In support of resource dependency theory, audit committee members with accounting and or auditing qualifications enables the audit committee members with diverse knowledge (resources) to deploy their resources for the improvement of financial sustainability of municipalities (Omesi & Appah 2022; Appah & Tebepah, 2020; Al-Lawati et al., 2021).

Hypothesis 5: Audit committee competence has a significant moderating effect on board size and financial sustainability. From Table 6, the finding shows that the interaction of the number of audit committee members with accounting and or auditing qualification (audit committee competence) and the number of board members (board size) is positively insignificant to financial sustainability of municipalities. Empirically, the finding from the structural equation model does not support studies of Fariha, Hossain and Ghosh (2021); Aljaaidi et al (2020) as well as Amin et al (2017) who reported that audit committee competence strengthen the relationship between board size and financial sustainability. Theoretically, this finding does not support the views of both agency and resource dependency theories. From the perspective resource dependency theory, the interaction between audit committee members with accounting and or auditing qualifications and the board members enhances the board members' perspectives to acquire resources and to bring to the boardroom diverse perspectives, skills, experience, networks, qualifications and knowledge for municipalities to make effective decisions to enhance financial sustainability (Nyatichi 2016; Sahar et al., 2018; Hillman et al., 2007). Moreover, from the perspective of agency theory, the interaction between audit committee members with accounting and or auditing qualifications and the board members strengthens the monitoring and control capacity of board members which in turn, can improve financial sustainability of municipalities (Sheikha et al., 2021; Shin, Chang, Jeon, 96 & Kim 2019; Jensen & Meckling, 1976; Fama & Jensen, 1983).

Hypothesis 6: Audit committee competence has a significant moderating effect on board independence and financial sustainability. From Table 6, the finding shows that the interaction of the number of audit committee members with accounting and or auditing qualification (audit committee competence) and the independent non-executive directors serving on boards (board independent) is positively insignificant to financial sustainability of municipalities. Empirically, the finding from the SEM does not support studies of Aprianti et al. (2021); Samuel (2020); Iskak and Muslih (2022); Wardati et al. (2021; Shatnawi etal. (2022) as well as El-Hawary (2021) who reported that audit committee competence strengthens the relationship between board independence and financial sustainability. Theoretically, this finding does not support the views of both agency and resource dependency theories. From the perspective resource dependency theory, the interaction between audit committee members with accounting and or auditing qualifications and the independent non-executives board members enhances the independent non-executive board members' perspectives to acquire resources and to bring to the boardroom diverse perspectives, skills, experience, networks, qualifications and knowledge for municipalities to make effective decisions to enhance financial sustainability (Cuervo–Cazurra et al 2019; Rubino & Napoli, 2020; Rubino & Napoli, 2020). Moreover, from the perspective of agency theory, the interaction between audit committee members with accounting and or auditing qualifications and the independent non-executive board members strengthens the monitoring and control capacity of independent non-executive board members which in turn, can improve financial sustainability of municipalities (Al-Matari & Al-Arussi 2016; Abdelbadie & Salama 2019; Rubino & Napoli, 2020; Abdelbadie & Salama, 2019).

Hypothesis 7: Audit committee competence has a significant moderating effect on board gender diversity and financial sustainability. From Table 6, the finding shows that the interaction between the audit committee members with accounting and or auditing qualification (audit committee competence) and the number of women serving on boards (board gender diversity) is positively insignificant to financial sustainability of municipalities. Empirically, the finding from the SEM does not support studies of Samuel (2020); Iskak and Muslih (2022); Wardati et al (2021); Shatnawi et al., (2022) as well as El-Hawary (2021) who reported that audit committee competence strengthens the relationship between board gender diversity and financial sustainability. Theoretically, this finding does not support the views of both agency and resource dependency theories. From the perspective resource dependency theory, the interaction between audit committee members with accounting and or auditing qualifications and the women directors enhances the women directors' perspectives to acquire resources and to bring to the boardroom diverse perspectives, skills, experience, networks, qualifications and knowledge for municipalities to make effective decisions to enhance financial sustainability (Nyatichi, 2016; Sahar et al., 2018; Hillman et al., 2007). Moreover, from the perspective of agency theory, the interaction between audit committee members with accounting and or auditing qualifications and the women directors strengthens the monitoring and control capacity of women directors which in turn, can improve financial sustainability of municipalities (Sheikha et al., 2021; Shin et al., 2019).

7. CONCLUSION

The aim of the study was to establish whether audit committee competence moderate the relationship between board of directors' attributes and financial sustainability of municipalities in Ghana. The findings from the study indicated that all the variables (board size, board independence, board gender diversity, and audit committee competence) have a direct significant relationship with financial sustainability. The findings also showed that audit committee competence significantly moderates the relationship between board gender diversity and financial sustainability. However, audit committee competence does not have a significant moderating effect on the relationship between board size, board independence and financial sustainability. Practically, the findings from this study may be useful to policy-makers to set regulations and policies that will ensure that all municipalities make effective use of audit committees and board of directors to strengthen financial sustainability. This will lead to improved financial sustainability and continues service delivery to the general public. The findings may help the regulators to appoint independent outside directors with accounting and or auditing qualification to the audit committee and board of directors. The findings will again provide information to the stakeholders to assess the contribution of audit committees and board of directors to the collection of internally generated funds of municipalities. The study was limited to Ghanaian municipalities and therefore the findings cannot be generalised globally. It was therefore limited to the board directors' attributes and audit committee competence. Therefore, future studies should look at other audit committee and board of directors' attributes either in the same or different sectors.

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