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Full Length Research Paper

Sustainable entrepreneurship of small businesses in Uganda: A confirmatory factor analysis

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This paper examines specific constructs for sustainable entrepreneurship as perceived in the Ugandan context using confirmatory factor analysis. This study is cross-sectional. Data were collected through a face to face survey of 384 small businesses in Kampala selected through stratified and simple random sampling. Data were analyzed through exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and descriptive statistics using Statistical Package for Social Sciences (SPSS) version 23. The study revealed that the constructs for sustainable entrepreneurship as perceived in the Ugandan context are production management, people and skills, ecosystem management, stakeholder, finance, strategy, marketing and sales. This suggests that seven factors with eigenvalues greater than one were identified, accounting for 63.23% of the total variance explained in sustainable entrepreneurship. This study presents initial evidence on the constructs of sustainable entrepreneurship that apply to the local context from the perspective of the business owners as opposed to the experts in the field. Implications on policy and practice were discussed.

Key words: Sustainable entrepreneurship, confirmatory factor analysis, Uganda.

INTRODUCTION

The Sustainable Development Goals (SDGs) seek to encourage businesses across the globe to prioritize both environmental and economic growth. This has resulted in the emergence of sustainable entrepreneurship as a new field of study that allows entrepreneurs to balance the social, environmental, and economic aspects of their businesses (Shepherd and Patzelt, 2017). Accordingly,

the government of Uganda is currently promoting sustainable entrepreneurship through industrialization as a catalyst for inclusive growth, employment and wealth creation in Uganda (Uganda National Planning Authority, 2020). As such, sustainable entrepreneurship is of a growing interest among academicians, practitioners, and policy makers (Muñoz and Cohen, 2018; Ploum et al.,

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2018; Gast et al., 2017). This is because it is estimated that about 90% of such businesses have focused on profit maximization rather than conserving the environment and societal values (Chege and Wang, 2020). This has resulted in environmental degradation, pollution, resource scarcity, and social challenges (Alani and Ezekiel, 2016; Baden and Prasad, 2016; Belz and Binder, 2017).

Extant evidence shows that most small businesses in Uganda pose both social and environmental challenges (Sendawula et al., 2020; Komakech et al., 2016). Such businesses are in the manufacturing, hotel and restaurant trade sector, for example, small businesses deal in firewood and charcoal to satisfy over 90% of Ugandans who have no access to electricity (UBOS, 2016). It is a common practice that such businesses cut trees without replacement, resulting in climate change and environmental degradation. Socially, small businesses in the agricultural sector use rudimentary technologies such as the excessive use of pesticides that pose health threats to the population (Oltromare et al., 2018).

In addressing these challenges, a new concept of sustainable entrepreneurship has emerged in entrepreneurship research. Sustainable entrepreneurship involves entrepreneurs pursuing profits while making a positive, sustainable impact on the environment and society. It also pertains to creating profitable enterprises and achieving certain environmental and social objectives; and pursuing and achieving what we often refer to as the triple bottom-line (Sarango-Lalangui et al., 2018). Scholars (Hussain et al., 2018; Sargani et al., 2020; Gu et al., 2020) have used the triple bottom line model to explain sustainable entrepreneurship. They developed it on the assumption that entrepreneurs should develop new “win-win-win” approaches. It argues that businesses should show the rapid increase of sustainable standards in their practices by balancing the three sustainability aspects. Every business whether small, medium or large has an obligation to the society in terms of economic, social or environmental aspects. To this extent, this model is relevant for this study because practicing sustainable entrepreneurship requires balancing the three sustainability aspects.

Existing sustainable entrepreneurship literature (Kimuli et al., 2020; Konys, 2019; Gast and Gundolf, 2017; Hernández-Perlino and Rung-Hoch, 2017; Mei et al., 2017; Muñoz and Dimov, 2017) has focused on its antecedents. Constructs of sustainable entrepreneurship undertaken by small businesses to maximize profits without affecting the natural environment and the values of the society remain unclear. We differ from these scholars by examining the constructs for sustainable entrepreneurship that are perceived relevant using evidence from 358 small business in Uganda. We postulate that understanding sustainable entrepreneurship

constructs as perceived from the Ugandan perspective facilitates uptake of actions that have a disposable constructive effect on the environment and the society.

This paper makes several contributions to existing literature on sustainable entrepreneurship, as we used principal component analysis with varimax to extract the constructs of sustainable entrepreneurship that are more relevant in the Ugandan context. Our results show that seven constructs, namely production management, people and skills, ecosystem management, stakeholder, finance, strategy, marketing and sales, explain sustainable entrepreneurship in the Ugandan context unlike social responsibility and innovation. This suggests that seven factors with Eigen values greater than one were identified, accounting for 63.23% of the total variance explained in sustainable entrepreneurship. We based study results on the understanding and experience of the Ugandan entrepreneurs operating small business as opposed to gathering response from experts. We are confident that entrepreneurs are in a better position to offer valuable information about what is practically happening.

Triple bottom line (TBL) theory suggests the dynamic balance between its three major aspects: environmental, social, and economic dimensions. These aspects form the major dimensions of sustainability thus, the triple bottom line (Elkington, 1997). According to Elkington, TBL is a sustainability related theory with the aim to search for a better way to express sustainable actions. The theory considers three aspects in measuring business performance, practices and success of the organizations. These three aspects include; economic, social and environmental. The theory has been further developed into “3P formulation” which include; people, planet and profits (Elkington, 2006). The bottom line of businesses is profit or loss. However, in pursuit of profit, enterprises should integrate the social and environmental aspects of their operations in equal proportions. TBL also enables small business owners to take longer perspectives to evaluate future consequences of their decisions.

Many scholars have widely used the triple bottom line theory to explain sustainable development (Shepherd and Patzelt, 2017). It does not limit the use of TBL to explain sustainable development conceptually. We acknowledge that small businesses play a vital role in preserving the environment, society and attaining economic gains, and the TBL is an important concept that is enabling small businesses to do so (Muñoz-Pascual et al., 2019; Liang et al., 2018). Existent studies have adopted the TBL theory in explaining sustainable entrepreneurship (Matthews et al., 2019; Choongo et al., 2016; Shepherd and Patzelt (2017) have conducted one of the most important works on TBL to explain sustainable entrepreneurship. The authors developed a

model based on the TBL aspects of the social, economic and environmental dimensions showing that entrepreneurs can operate their businesses, maximizing profits while conserving the environment and the values of the society.

The economic aspect deals with the flow of money in and out of the business (Rossi et al., 2020). Entrepreneurs are not doing charity work; they cannot survive without financial resources hence for sustainable entrepreneurs to operate successfully, they need to balance financial, social and environmental aspects. Entrepreneurs who heavily emphasize economic gains are known as conventional or commercial entrepreneurs (Das and Rangarajan, 2020). This implies that such economic entrepreneurs exploit opportunity and use resources for profit gains and therefore are not sustainable entrepreneurs since their primary goal is economic gains. The economic line of TBL refers to the business practices that impact on the economic system (Arsić et al., 2020; Elkington, 2004). In addition, it refers to the ability of the economy as the sub-system of sustainability to continue in order to support future generations (Niaki et al., 2019). It focuses on the economic value in terms of consistent economic growth, risk management, saving, research and development, wages, taxes and employment. Thus, small business owners in Uganda undertake entrepreneurial actions purposely to maximize profits. This implies that the majority of them are seemingly not sustainable entrepreneurs. Therefore, this study sought to investigate sustainable entrepreneurship constructs as perceived in the Ugandan context.

Businesses are globally responsible to contribute to social development through job creations and tax payment to the government. However, businesses have currently changed their attitude toward social responsibility of the business because of emergence of corporate social responsibility that is like sustainable entrepreneurship. Gupta et al. (2020) revealed that a sustainable entrepreneur is one who fulfills people and community needs. Thus, the social line of the TBL refers to business practices that benefit the community or society (Elkington, 1997). These practices should value the society by considering the community in pursuit of profits. Such practices include; employment, education, social care, health, community investment, recreation, cultural investment and public awareness. Leaving out the social aspect may lead to increased economic costs in terms of security and market share (Sahasranamam and Nandakumar, 2020). It is important to note that social entrepreneurship and sustainable entrepreneurship are different. This is because both concepts have different agendas. For example, social entrepreneurs focus on social aim, welfare, and unity. On the other hand, sustainable entrepreneurship should not focus on social

aspects only but balancing the economic, environmental and social aspects in equal proportions. Therefore, small business owners in Uganda should practice sustainable entrepreneurship through undertaking activities that improve the welfare of the society while making profit and conserving the environment.

The environmental aspect is the most widely recognized dimension of sustainable entrepreneurship in literature. Shepherd and Patzelt (2017) acknowledged that the ecological system is the foundation of environmental sustainability because resources such as air, water and energy are part of the environment. Such resources are scarce and non-renewable; thus, they should be preserved to benefit the current and future generations. Therefore, the environmental aspect in TBL refers to engaging in practices that do not compromise the environmental resources for future generations (Elkington, 1997). It pertains to the efficient use of energy resources, reducing greenhouse gas emissions and minimizing the ecological footprint (Sun et al., 2020; Adedoyin et al., 2020). Hence, small business owners-managers in Uganda should undertake entrepreneurial actions that are preserving natural resources for the benefit of the current and future generations.

Concept of sustainable entrepreneurship

Sustainability comes from sustainable development, which simply means development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987). Scholars have defined sustainability differently, with complicated meanings and interpretations. According to Purvis et al. (2019), sustainability is a rise in the standards of living of the poor in terms of food, access to education, healthcare, water and actual income. In addition, Salas-Zapata and Ortiz-Muñoz (2019) view sustainability as the capacity to stand for a period of time. Furthermore, Elkington (1994) defines sustainability as the balancing of the environment, social and economic aspects. This is also known as the triple bottom line (TBL). John Elkington coined triple bottom line in 1994. Triple bottom line has been the emphasis of sustainability in business. In another study, they extended triple bottom line to include five domains; economic, social, ecological, cultural and ethical aspects (Nuringsih et al., 2019). The impact of the triple bottom line is viewed in terms of “Economic (break-even point), self-defined social and self-defined ecological value-creation goal reached” (Farny and Binder, 2021). We conclude the sustainable entrepreneurship journey with attaining financial breakeven point and the enterprise’s own social and environmental goals.

In recent times, the United Nations has come up with

sustainable development goals that include; ending poverty and hunger, improving health and education, making cities more sustainable, combating climate change and protecting oceans and forest (Leal, 2020). These goals require entrepreneurs to go out in search of opportunities to create value while keeping in mind sustainable use of resources. Entrepreneurship is an important conduit for a more sustainable economy. Entrepreneurs pass on sustainable products, process, and start-ups in order to solve social and environmental problems (Belz and Binder, 2017). This kind of process has been termed as sustainable entrepreneurship (Shepherd and Patzelt, 2017).

Sustainable entrepreneurship is a new concept of the entrepreneurship literature that has no consensus on the definition. All the definitions have emphasis on five aspects like its process, a goal, source of entrepreneurial opportunities, to whom, balancing TBL, transition of future goods and services, recognition, developing and exploiting opportunities (Binder and Belz, 2015). In addition, Sustainable entrepreneurship is defined as “the focus on the preservation of nature, life support, and community in pursuing perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and the society” (Shepherd and Patzelt, 2017).

In this study, we view sustainable entrepreneurship as a concept that endeavors to balance the economic, social and environmental aspects. In other words, they should pursue economic gains while keeping the environmental and social impact at the minimum. Sustainable entrepreneurship research is still in its infancy stage with so many conceptual studies. Quantitative and empirical studies are still few. Therefore, there is a need to examine specific constructs for sustainable entrepreneurship as perceived in the Ugandan context using confirmatory factor analysis.

We should pursue sustainable entrepreneurship with the growing benefits. Small business owners could use it as a competitive advantage in terms of reputation, customer satisfaction, organizational commitment, financial performance, motivation of employees, risk management, market opportunities and improvement in internal business dynamics (Cantele and Zardini, 2018; Alani and Ezekiel, 2016). However, taking on sustainability is costly for entrepreneurs in the short term though with multiple benefits in the long term (Kimanzi and Gamede, 2020).

In addition, social and environmental problems have created potential business opportunities which entrepreneurs can exploit, thereby balancing the social, economic and environmental aspects of their businesses to benefit the stakeholders (Belz and Binder, 2017). As such, sustainable entrepreneurship may attract funding

from the public, which suggests that sustainable enterprises have a better market position. Though the market is top end and most often not available, it is tedious which increases the chances of failure. Other scholars like Soto-Acosta et al. (2016) found out that sustainable entrepreneurship influences long term business performance in terms of sustainability and may lead to market share growth of the firm.

Previous studies have focused on competences, institutional framework, risks and barriers, entrepreneurial environment, altruism towards others, knowledge, government regulations, sustainable entrepreneurship practices, value and future orientation of sustainable entrepreneurs (Alani and Ezekiel, 2016; Fichter and Tiemann, 2018; Hoogendoorn et al., 2019; Ahmad et al., 2020; Thelken and de Jong, 2020), with less attention on the dimensions of sustainable entrepreneurship. This motivated the researchers to conduct this study to examine the specific dimensions of sustainable entrepreneurship as perceived in the Uganda context using evidence from small businesses.

MATERIALS AND METHODS

The study's research design was cross-sectional and correlational. The study population is made up of 108,534 small businesses in Kampala (UBOS, 2016). Using Krejcie and Morgan (1970) sampling table, 384 small businesses were selected. We selected small firms from the trade, hospitality and manufacturing business sectors using stratified and simple random sampling techniques. We categorized small businesses according to the number of employees and capital investment (MTIC, 2015). Accordingly, businesses that employ between 5 and 49 and have a capital investment of UGX: 10 million but not more than 100 million were included in this study (MTIC, 2015). Out of the targeted sample size of 384 small businesses, we received 358 usable questionnaires back from small business owners who completed the questionnaires, giving a response rate of 93%. The researcher's face-to-face engagement with the respondents and maintaining of frequent communication with respondents during the data collection process resulted in the high response rate. We chose small businesses as the unit of research for this study because they contribute significantly to the growth of the Ugandan economy by creating jobs, distributing wages, and generating government revenue (Orobia et al., 2020). We chose small business owners or managers as the unit of inquiry because they possess pertinent knowledge about the businesses under investigation.

A questionnaire using six-point Likert scale ranging from Very often to Never was designed and used to collect the data by measuring the opinions of respondents. We used a face-to-face administration of questionnaire to enable interaction between the researcher and the respondents, and to improve the quality of responses and response rate. The questionnaire design was based on reviewing extant literature on sustainable entrepreneurship (Shepherd and Patzelt, 2017). Sustainable entrepreneurship was measured using Soto-Acosta et al. (2016) and Elkington (1997) items that include; environmental sustainability (ecosystem management, production management, resource management), social sustainability (social responsibility, people and skills, stakeholders) and economic sustainability

(strategy, finance, marketing, innovation).

We use factor analysis, Cronbach's alpha coefficient, and content validity index to test for the validity and reliability of the research instrument. The content validity index (CVI) was computed and had a CVI value of 0.80. Cronbach's alpha coefficient was measured to test reliability of how closely related a set of items are as group and the Cronbach alpha values for all the study variables were above 0.7 which is acceptable (Nunnally, 1967).

Data analysis

SPSS was used to summarize the data and facilitate the analysis of the findings. Specifically, quantitative data derived from the questionnaire was analyzed using data coding to get exploratory factor analysis results in order to classify components of sustainable entrepreneurship as viewed by Ugandans (Field, 2013). Additionally, frequencies were developed to document the many activities that exemplify sustainable entrepreneurship in small businesses. This was followed by a confirmatory factor analysis using AMOS to validate the constructs of sustainable entrepreneurship using data from Uganda's small businesses (Hair et al., 2014).

RESULTS AND DISCUSSION

The study revealed that majority of the respondents were females (52%), and the majority were in the 29-39 years age bracket (38%), followed by those in the 18-28 years age group (28%), clearly showing that on average, those in business are below 40 years old. In addition, majority of the respondents had either a diploma or bachelor's degree (27%), showing that they have enough knowledge to take part in the study. This is followed by masters' degree holders (20%), showing that the respondents were knowledgeable as far as the issues under study are concerned. However, majority of the small business owners and managers had got training on sustainability concerns (53%) while 47% had no form of training on sustainability concerns. The results further show that most of the businesses were between 2-5 years old (55%). This is followed by those that have been around for a period between 6-10 years (30%), showing that most of the businesses were fairly new in their operations.

The purpose of this study was to examine sustainable entrepreneurship construct in order to identify its components as perceived in the Ugandan context. This section starts with exploratory factory analysis results, followed by descriptive statistics using frequencies.

A principal component analysis (PCA) was utilised to reduce the number of variables under investigation and highlight groups of interrelated variables. All the assumptions of the PCA model were satisfied as suggested by Field (2013). Table 1 shows that seven factors with Eigen values greater than one were identified, accounting for 63.23% of the total variance explained in sustainable entrepreneurship.

Except for items under resource management and strategy, each variable had its highest loadings (above 0.5) on the component it conceptually belongs to showing convergent validity is adequate. Reliability tests relating to each component scale were satisfactory, with reported Cronbach's alpha coefficient of 0.07 or higher. Seven items were extracted as opposed to the ten conceptualised factors. It eliminated all items under social responsibility and innovation, while all items under resource management loaded on the production management construct. The seven factors were labelled as production management, people and skills, ecosystem management, stakeholder, finance, strategy and marketing, respectively. Furthermore, it was established that production management explained more of the variance in sustainable entrepreneurship (12.5%), followed by people and skills (11.8%), ecosystem management (10.7%), stakeholder (8.9%), finance (7.9%), strategy (6.6%) and marketing (4.9%) respectively. This implies that production management more than the other factors causes variability in sustainable entrepreneurship.

Further analyses were conducted to establish the frequency of undertaking the various activities that reflect sustainable entrepreneurship among small businesses, and we report the results for each construct of sustainable entrepreneurship in the following section.

Frequency distribution on ecosystem management

Results in Table 2 show that on average, the identified activities under ecosystem management are often undertaken by the small businesses, thus reflecting evidence of sustainable entrepreneurship.

Frequency distribution on ecosystem management

Results in Table 2 show that on average, the identified activities under ecosystem management are often undertaken by the small businesses, thus reflecting evidence of sustainable entrepreneurship.

Frequency distribution on production management

Results in Table 3 show that on average, the identified activities under production management are often undertaken by the small businesses, thus reflecting evidence of sustainable entrepreneurship.

Frequency distribution on people and skills

Results in Table 4 show that on average, the identified activities under people and skills are often undertaken by

Table 1. EFA results on sustainable entrepreneurship.

Item code	Statements	Prodn Mgt	People and skills	Ecosys mgt	Stakeholder	Finance	Strategy	Mktg and sales
pm7	Control the quality of the products/service using cultural/mechanical methods rather than relying on the use of chemicals	0.750						
pm6	Make a plan that helps to maintain and improve the quality of supplies and natural resources	0.691						
pm8	Maintain a written record of all activities relating to the use of chemicals and preservatives	0.671						
pm3	Undertake fertilization/use of artificial ingredients/chemicals when and where absolutely necessary	0.667						
pm9	Use Chemicals in the production process when and where it is absolutely necessary	0.631						
pm2	Routinely undertake sample analysis to improve the quality of products/services	0.623						
rm1	Write a plan that specify targets and actions for reducing energy usage	0.611						
pm5	Use technology to monitor and improve production efficiency	0.602						
rm2	Take into account energy efficiency when purchasing new plant and equipment	0.590						
pm1	Develop a management plan to support the production of quality products/services	0.582						
rm3	Review energy usage in all aspects of the business (office, production, transport)	0.544						
ps4	Give constructive feedback to employees about their performance		0.744					
ps8	Regularly identify training needs (e.g. Legal, technical, management skills)		0.743					
ps6	Provide health and safety training to staff		0.730					
ps2	Undertake training		0.719					
ps5	Write a well-defined job descriptions for the employees		0.697					
ps3	Give credit to someone who goes out of their way to improve the performance of our business		0.686					
ps7	Have an effective employee induction program (e.g. Roles and responsibilities, health and safety)		0.680					
ps1	Have employees understand where the business will be in three years' time		0.597					
em7	Write environmental and sustainability policy			0.814				
em5	Operate a recycling policy covering all parts of your business			0.760				
em9	Document waste management plan			0.742				
em2	Review and up-date plans to reduce and to recycle wastes			0.732				
	Collect information on waste generated in all parts of the business			0.704				
em8	Commit to protecting and conserving the local ecosystem			0.673				
em6	Use a variety of measures to monitor the impact on the environment			0.660				
s3	Understand how environmental performance impacts on the business				0.768			
s4	Network with other local business owners				0.720			
s1	Fully understand customers' views on environmental issues				0.713			

Table 1. Cont'd

s2	Promote environmental and sustainability policies to customers	0.692						
s5	Participate in one or more business associations	0.643						
s6	Take time to communicate regularly with the key stakeholders	0.620						
f2	Monitor income and expenditure monthly against formal budgets	0.760						
f1	Identify the resources needed to achieve business objectives	0.755						
st5	Review and up-date the performance against written business objectives	0.714						
f3	Have a cash flow forecast for both this year and next year	0.642						
st1	Have a clear, well thought out written business plan	0.733						
st2	Clear where you want the business to be in three years from now	0.713						
ms2	Evaluate the threats and opportunities facing the business within the past 12 months	0.613						
ms1	Evaluate the strengths and weaknesses of the business	0.572						
st3	Prioritize profit growth and not just turnover growth	0.526						
ms4	Review and up-date customers' database in the last 12 months	0.713						
ms5	Update the website of the business	0.673						
ms8	Review and up-date the promotional materials within the past 24 months	0.616						
Total variance explained								
Percent		2.46	11.77	10.74	8.96	7.78	6.59	4.93
Cum percent		12.46	24.23	34.97	43.93	1.71	58.30	63.23
Eigen value		5.61	5.30	4.83	4.03	3.50	2.96	2.22

Scale reliability analysis; Cronbach's alpha; Kaiser Meyer Olkin measure of sampling adequacy = 0.852; Bartlett test for sphericity = 11487.43, significance level = 0.000. Source: Primary data.

the small businesses, thus reflecting evidence of sustainable entrepreneurship.

Frequency distribution on stakeholders

Results in Table 5 show that on average, the identified activities under stakeholders are often undertaken by the small businesses, thus reflecting evidence of sustainable entrepreneurship.

Frequency distribution on finance

Results in Table 6 show that on average, the identified activities under finance are often undertaken by the small businesses, thus reflecting evidence of sustainable entrepreneurship.

Frequency distribution on strategy and marketing

Results in Table 7 show that on average, the identified activities under two constructs—strategies and marketing are often undertaken by the small businesses, thus reflecting evidence of sustainable entrepreneurship.

CFA measurement model for sustainable entrepreneurship

We measured sustainability entrepreneurship using environmental sustainability, social sustainability and economic sustainability. Nonetheless, environmental sustainability was measured in terms of ecosystem management, production management and resource management; we measured social sustainability in terms of social responsibility, people and skills and stakeholders; while we measured economic sustainability in terms of strategy, finance, marketing and sales and innovation, resulting in 10 factors. However, these factors were reduced to 7 factors during the EFA and subjected to a CFA. The initial CFA results showed that although the standardized parameter estimates were all significant ($p < 0.001$), the fit-indices were below the acceptable level signifying a poor measurement model fit. This caused a re-specification by iteratively removing items that did not meet the acceptable criteria. The purpose of repeating the filtering process was to remove as few items as possible, considering the need to derive a more parsimonious model. Examination of the modification indices (MIs) revealed mis-specifications affiliated with 22 items. 22 out of 44 items in total were iteratively removed

Table 2. Descriptive statistics on ecosystem management (valid percent).

How often do you ...	1	2	3	4	5	6
Collect information on waste generated in all parts of the business	11.7	20.5	18.7	13.3	13.6	22.3
Review and up-date plans to reduce and to recycle wastes	13.0	14.5	14.8	20.2	21.1	16.6
Write environmental and sustainability policy	19.0	12.0	21.4	11.4	17.5	18.7
Commit to protecting and conserving the local ecosystem	4.8	9.6	15.4	28.6	19.3	22.3
Document waste management plan	18.1	8.4	15.7	20.2	15.7	22.0

Legend – 1 'never', 2 'rarely', 3 'somewhat rarely', 4 'somewhat often', 5 'often', 6 'always'.

Table 3. Descriptive statistics on production management (valid percent).

How often do you ...	1	2	3	4	5	6
Develop a management plan to support the production of quality products/services	7.2	9.9	17.8	21.1	17.2	26.8
Routinely undertake sample analysis to improve the quality of products/services	6.3	9.3	15.7	18.4	29.5	20.8
Undertake fertilization/use of artificial ingredients/chemicals when and where absolutely necessary	15.7	7.5	12.3	16.0	23.2	25.3
Make a plan that helps to maintain and improve the quality of supplies and natural resources	8.1	9.0	15.4	19.0	22.3	26.2
Control the quality of the products/service using cultural/mechanical methods rather than relying on the use of chemicals	11.4	7.8	13.9	23.2	21.7	22.0
Maintain a written record of all activities relating to the use of chemicals and preservatives	12.0	4.5	13.9	20.2	19.9	29.5
Use Chemicals in the production process when and where it is absolutely necessary	7.2	10.2	13.0	15.1	23.8	30.7
Write a plan that specify targets and actions for reducing energy usage	14.8	6.3	8.7	20.5	22.6	27.1
Take into account energy efficiency when purchasing new plant and equipment	6.9	9.6	12.7	16.0	28.0	26.8
Review energy usage in all aspects of the business (office, production, transport)	9.0	6.0	15.4	16.6	26.2	26.8

Legend – 1 'never', 2 'rarely', 3 'somewhat rarely', 4 'somewhat often', 5 'often', 6 'always'.

Table 4. Descriptive statistics on people and skills (valid percent).

How often do you ...?	1	2	3	4	5	6
Have employees understand where the business will be in three years' time	6.3	2.7	15.4	21.7	26.2	27.7
Undertake training	5.4	3.9	15.1	22.6	27.4	25.6
Give credit to someone who goes out of their way to improve the performance of our business	5.1	4.5	12.7	19.9	25.9	31.9
Give constructive feedback to employees about their performance	5.4	5.7	9.3	21.1	28.9	29.5
Write a well-defined job description for the employees	4.8	6.3	14.2	15.1	30.7	28.9
Provide health and safety training to staff	5.1	11.4	12.0	14.2	23.2	34.0
Have an effective employee induction program (e.g., Roles and responsibilities, health and safety)	0.0	8.7	11.7	23.2	24.7	31.6
Regularly identify training needs (e.g., Legal, technical, management skills)	8.4	4.2	10.5	19.6	30.7	26.5

Legend – 1 'never', 2 'rarely', 3 'somewhat rarely', 4 'somewhat often', 5 'often', 6 'always'.

Table 5. Descriptive statistics on stakeholders (valid percent).

How often do you ...	1	2	3	4	5	6
Fully understand customers' views on environmental issues	4.2	7.8	19.3	17.8	22.3	28.6
Promote environmental and sustainability policies to customers	0.0	11.7	10.8	20.2	35.5	21.7
Understand how environmental performance impacts on the business	0	8.4	15.1	15.1	30.4	31.0
Network with other local business owners	3.9	4.2	13.9	19.9	18.1	40.1
Participate in one or more business associations	5.4	3.0	15.7	23.2	25.3	27.4
Take time to communicate regularly with the key stakeholders	4.5	6.6	15.1	17.5	22.3	34.0

Legend – 1 'never', 2 'rarely', 3 'somewhat rarely', 4 'somewhat often', 5 'often', 6 'always'.

Table 6. Descriptive statistics on finance (valid percent).

How often do you ...	1	2	3	4	5	6
Monitor income and expenditure monthly against formal budgets	0	12.0	5.1	17.8	26.5	38.6
Identify the resources needed to achieve business objectives	7.5	4.5	9.6	12.7	31.9	33.7
Review and up-date the performance against written business objectives	3.3	8.7	12.0	19.9	26.2	29.8
Have a cash flow forecast for both this year and next year	0	2.4	14.5	24.7	31.6	26.8

Legend – 1 'never', 2 'rarely', 3 'somewhat rarely', 4 'somewhat often', 5 'often', 6 'always'.

Table 7. Descriptive statistics on strategy and marketing (valid percent).

How often do you ...	1	2	3	4	5	6
Have a clear, well thought out written business plan	0	8.4	11.7	22.3	26.8	30.7
Clear where you want the business to be in three years from now	0	9.6	14.2	22.9	29.8	23.5
Evaluate the threats and opportunities facing the business within the past 12 months	0	4.5	9.9	16.3	41.9	27.4
Evaluate the strengths and weaknesses of the business	0	1.5	8.7	18.4	31.3	40.1
Prioritize profit growth and not just turnover growth	0	4.8	14.8	25.6	28.6	26.2
Review and up-date customers' database in the last 12 months	0	5.7	15.7	21.7	28.3	28.6
Update the website of the business	7.2	7.2	16.6	16.3	26.2	26.5
Review and up-date the promotional materials within the past 24 months	1.5	3.9	25.3	15.1	28.6	25.6

Legend – 1 'never', 2 'rarely', 3 'somewhat rarely', 4 'somewhat often', 5 'often', 6 'always'

in the ultimate model prior to further analysis. While the number of deleted items was relatively high compared to the total, their removal did not change the content of the construct as it was conceptualized. This is so because the retained items were significant and had standardized factor loadings higher than the recommended level of 0.50 thus, the meanings of the factors were preserved. The findings confirmed the validity of the ultimate model with excellent model fit statistics for this construct measure as reported in Table 8 and Figure 1. Given that the model fit the data well and the correlation between the underlying factors was less than 0.85, no further adjustments were required.

DISCUSSION

The study results show that seven constructs that include; production management, people and skills, ecosystem management, stakeholder, finance, strategy, marketing and sales explain sustainable entrepreneurship in the Ugandan context. This suggests that seven factors with Eigen values greater than one were identified, accounting for 63.23% of the total variance explained in sustainable entrepreneurship.

Firstly, looking at the exploratory factor analysis results, it was established that seven factors that make up sustainable entrepreneurship were extracted, as opposed to the ten factors fronted by the triple bottom line

scholars. Specifically, all items under social responsibility and innovation were eliminated, while all items under resource management loaded on the production management construct. The seven factors were labeled as production management, people and skills, ecosystem management, stakeholder, finance, strategy and marketing, respectively. Environment sustainability remained with ecosystem and production management, Social sustainability remained with people and skills and stakeholders, while financial sustainability remained with finance, strategy and marketing. This has implications for future studies on sustainable entrepreneurship in Uganda, in that such factors should employ the seven factors and not necessarily the original ten factors. Social responsibility items may not measure sustainable entrepreneurship in Uganda because, the profit margin of these businesses does not permit them to undertake such activities as compared to big companies that have enough resources to support social activities as one of the marketing strategies. As such, small businesses rarely engage in social responsibility activities, except for helping the traditional extended families. The elimination of innovation as a factor of sustainable entrepreneurship can be explained by the fact that most businesses in Uganda are the "me-too" businesses. The copy-cat syndrome does not provide room for development of new ideas, products and processes. Basing on these arguments, social responsibility and innovation are inconsequential in constructing sustainable entre-

Table 8. CFA- Sustainable entrepreneurship.

Paths	Constructs	Unstandardized coefficient			P	Standardized Est	
		Estimate	S.E.	C.R.			
PM3_1	<---	PdnMgt	1.00			0.74	
PM8_1	<---	PdnMgt	0.96	0.07	13.01	***	0.75
PM9_1	<---	PdnMgt	1.03	0.07	14.15	***	0.85
PS1_1	<---	PplSk	1.00				0.63
PS2_1	<---	PplSk	1.08	0.11	9.97	***	0.70
PS6_1	<---	PplSk	1.20	0.12	9.92	***	0.69
PS7_1	<---	PplSk	1.05	0.10	10.32	***	0.73
SH2_1	<---	StkHold	1.00				0.75
SH4_1	<---	StkHold	1.14	0.09	12.42	***	0.76
EM2_1	<---	EcoSys	1.00				0.75
EM5_1	<---	EcoSys	1.14	0.07	15.27	***	0.85
EM6_1	<---	EcoSys	1.02	0.07	13.82	***	0.77
EM7_1	<---	EcoSys	1.08	0.08	13.49	***	0.76
F3_1	<---	Fin	1.00				0.68
F2_1	<---	Fin	1.64	0.12	13.27	***	0.91
F1_1	<---	Fin	1.57	0.13	12.60	***	0.77
ST3_1	<---	Strat	0.95	0.07	13.38	***	0.76
ST2_1	<---	Strat	1.15	0.08	14.35	***	0.85
ST1_1	<---	Strat	1.00				0.75
MS4_1	<---	Mktg	1.00				0.70
MS8_1	<---	Mktg	1.10	0.13	8.46	***	0.73
SH5_1	<---	StkHold	1.04	0.09	11.96	***	0.72
Achieved Fit Indices							
CMIN/DF	RMSEA	GFI	CFI	TLI	NFI		
2.3	0.063	0.903	0.932	0.913	0.887		
(416/181)							

preneurship among small businesses in Uganda.

These results are consistent with Soto-Acosta et al. (2016), who reported that business owners' approaches towards the social, environmental and economic aspects promote businesses performance in terms of increased turnover and market share and customer satisfaction and retention. This is further echoed by Hosseininia and Ramezani (2016). They showed that social and environmental factors of customer orientation, recycling, and the need to conserve the future significantly promotes sustainable entrepreneurship of SMEs in Iran's food industry. However, our results disagree with Mayanja et al. (2019), who reported that there is a positive relationship between entrepreneurial networking and ecologies of innovation of small and medium enterprises (SMEs) in Uganda. This suggests that SMEs innovate their products, services, markets and operations to meet the changing customer needs.

Secondly, it was evident that environmental

sustainability explains more variance (23.3%) in sustainable entrepreneurship followed by social sustainability (20.7%) and economic sustainability (19.4%) respectively. When investigating sustainable entrepreneurship among small businesses, emphasis should be put on environment and social factors than economic factors. No wonder, it is frequently reported that such businesses rarely survive beyond three years because they lack the financial muscle which is the oxygen of any business as blood is for humans. This deduction resonates well with Namagembe et al. (2019). They reported that eco-design and internal environmental management practices positively and significantly influence the ecological performance of manufacturing small and medium enterprises in Uganda. Li et al. (2020) also add that industries exhibit clean production behaviour and green supply chain management practice. This implies that businesses that undertake their production and supply chain operations while considering

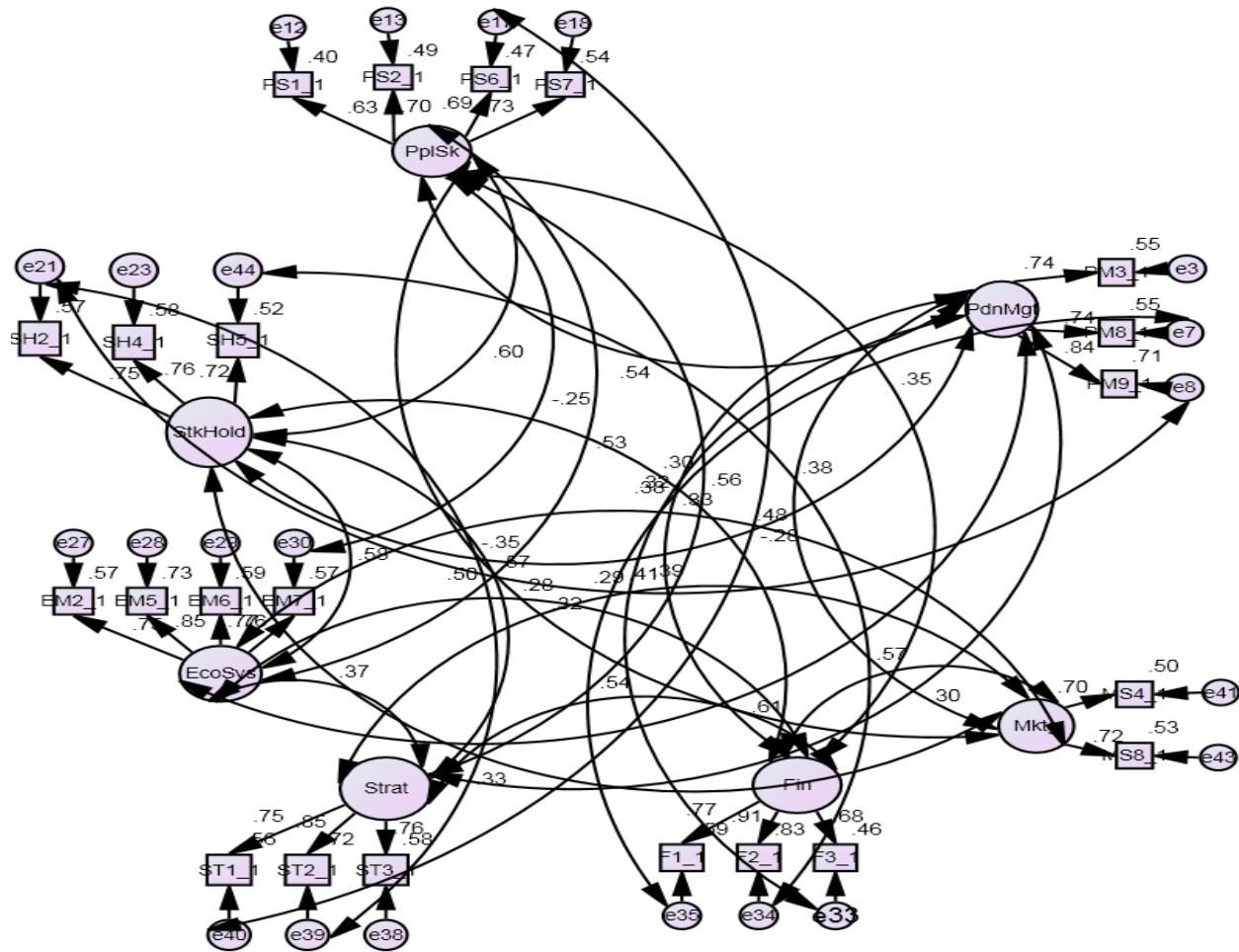


Figure 1. CFA measurement model for Sustainable entrepreneurship.

the natural environment usually supports the uptake of environmental sustainability practices in their operations. In another study conducted by Piyathanavong et al. (2019) on adopting organizational environmental protection methods in Thailand's manufacturing sector, it was revealed that manufacturing firms consider the impact on the environment and benefits from adopting these operational approaches as the company's policy and initiative, environmental awareness, and cost saving as the primary reasons for adopting environmental sustainability practices in Thailand.

Thirdly, the descriptive statistics revealed that respondents were regularly involved in activities related to economic, social and environment sustainability. On the face, the results seem to contradict the earlier motivation of the study. Nonetheless, a deeper analysis revealed that most of these actions are done in a rudimentary manner. For instance, most small businesses

do not have well prepared plans let alone strategic plans. But they have something sketchy which often is kept as 'memory records'. On training employees and creating awareness to customers about sustainability matters, they do so subconsciously without forethought. They do not have written policies to this effect. In addition, most of the businesses have waste disposal mechanisms in place to ensure that they try not to litter their waste. In a nutshell, these activities are undertaken in a rudimentary way and when compared to formal procedures, such activities would pass as non-existent. This is supported by the findings of Orobia et al. (2020) that revealed that youth and women entrepreneurs undertake social, environmental and economic practices in their businesses. This is further strengthened by Sendawula et al. (2020), who showed that manufacturing small and medium enterprises undertake waste management, eco-friendly packaging, energy efficiency and water

conservation as practices that have to conserve the natural environment and the values of the society while catalyzing economic development.

CONCLUSION AND RECOMMENDATIONS

This study has shown that sustainable entrepreneurship in small businesses is best understood from the lens of the small business owners. On understanding sustainable entrepreneurship among small businesses in Uganda, the study revealed that there is evidence of practice of economic, environmental and social sustainability thus sustainable entrepreneurship. This finding was not surprising because Uganda is a collectivist economy and therefore sustainability issues are a major concern to most citizens. In Uganda, all businesses, customers and other stakeholders in the society jointly used certain resources, for example, free education at the primary and secondary levels and roads are used freely. In addition, Uganda faces many social problems such as poverty, unemployment, prostitution, corruption, crimes, poor health, drug abuse, child labour and poor education facilities. This implies that social sustainability comes at the forefront. Similarly, environmental concerns like pollution, deforestation are a major call by Ugandans of recent.

Our findings imply that policymakers should develop and closely monitor production management, people and skills, ecosystem management, stakeholder, finance, strategy, marketing and sales aspects of small businesses if sustainable entrepreneurship is to be embraced in Uganda. Small-business owner-managers should also integrate the social, environmental and economic aspects in their businesses to catalyze sustainable development in Uganda.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests

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Full Length Research Paper

The influence of gender diversity and company financial performance in East Africa

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The main aim of this study was to examine the influence of gender diversity on financial performance of EAC's listed companies and to compare influence of gender diversity on company's financial performance before and after the operationalisation of the East African Community (EAC) Common Market in 2010. The authors adopted a positivist paradigm in a quantitative analysis using non-probability sampling to select forty-two EAC listed companies. They developed hypotheses basing on secondary data from data stream database and annual reports. SPSS was used to generate correlation, and regression results. The findings indicated that gender diversity of the board has no statistically significant influence on company financial performance measured by Return on Assets (ROA), Return on Equity (ROE), Tobin Q ratio (TBQ) and Price Earnings Ratio (PER). Secondly, the authors discovered no changes in gender diversity for most listed companies for the period before and after operationalisation of the EAC - Common Market.

Key words: Gender, diversity.

INTRODUCTION

The relationship between company performance and gender diversity has been a topical issue over a long a time. Many researchers have shown a growing concern over influence of gender diversity and company finance performance (Adams et al., 2011; Ahern and Dittmar, 2012; Broadbridge et al., 2006; Eckel and Grossman, 2008; Fawcett and Pringle, 2000; Giovinco, 2014). Many countries enacted regulations aimed to increase the number of female directors on board (Bohren and Strom, 2010; Lerner and Oberholzer, 2015; Reguera-Alvarado et

al., 2017). For instance, in 2003, Norway, Finland, France, India, Italy, the Netherlands, Spain, and Belgium introduced the board-gender quota regulation that required all listed companies to have at least 40% female board representation (Lerner and Oberholzer, 2015).

The presence of female directors is seen as a means to effective board independence, board monitoring and control of the executive, which minimises the principal-agent conflicts (Ang et al., 2000). Moreover, female directors increase company performance via improved

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performance “disclosure practices” (Barako and Brown, 2008:321). Female managers also tend to have better monitoring skills, such as independent thinking, than their male counterparts which improves board performance (Adams et al., 2011).

Using the ‘upper echelons’ theory, Hambrick (2007) posits that the board of directors have different cognitive frames, which influences their companies’ financial performance. These cognitive frames include their information-seeking, evaluation and processing, which depends on the directors’ experiences, knowledge, and values (Hambrick, 2007). Such experiences, knowledge, and values shape the directors’ information processing and decision-making capabilities, which ultimately influence the companies’ financial performance. Recruiting female directors onto a board is therefore, is perceived as a way of expanding the available pool of cognitive frames, because female directors tend to have patience and natural sales and marketing skills (Groysberg and Bell, 2013).

Again, According to Singh et al. (2008), female directors possess different experiences and knowledge due to their different pathways to directorship positions. While most of the female directors may not have been senior executives before being, appointed as board directors, they have more home management skills given their nurturing roles in family. Moreover, Women tend to have more domestic influence over their male counterparts on such decisions like, domestic sales and purchasing decisions (Phipps and Burton, 1998). Hence, appointing female directors may improve the company management’s understanding of the consumer markets (Campbell and Minguez-Vera, 2008). Moreover, Groysberg and Bell (2013) posits that female directors have greater interests in philanthropy and community service than their male counterparts, which translates to good ideas that are relevant to companies’ interests (Groysberg and Bell, 2013). According, to Reguera-Alvarado et al. (2017), increasing the number of female directors enhances companies’ economic performance.

Gender-diverse boards are more motivated to engage in deep and extensive discussions for the benefit of the company’s financial performance. According to Loyd et al. (2013), well diverse boards tend to engage in deeper discussions, shares different knowledge and skills than a homogeneous board. Mahadeo et al. (2012), posits that female directors are more likely to adopt a cooperative decision-making approach with less prejudice especially when competing interests are at stake and Peterson and Philpot (2007) suggest that male directors are more likely to base their decisions on more traditional ways of problem solving following established rules and regulations.

On the other hand, Carter et al. (2010) documented a negative relationship between gender diversity and company financial performance in listed companies in the USA. Their study concluded that neither ethnicity nor gender diversity positively influence a company’s financial

performance. Likewise, Francoeur et al. (2008) studied the relationship between gender diversity and company performance by examining the contribution of women directors and senior management to company financial performance. They discovered that companies that operated in difficult environments produced less return attributed to female board directors. Although the participation of female directors did not seem to make a difference in this regard, companies with a high proportion of women in both their management and governance systems generated enough value to keep up with normal stock-market returns. Hence, they advocated for smaller proportion of female directors on the board as a means of generating higher return on investment.

A study by Bohren and Strom (2010) in Norway overlooked the importance of gender diversity. The study was aimed at analysing the economic rationale for board quota regulation in Norway, being the first country in the world to implement the gender quota system (Adams et al., 2011). The study discovered that companies with higher gender diversity created less value for their owners than those with lower gender diversity. They thus advised corporate governance regulators not to enforce a gender quota system but rather to allow companies to make a choice of their directors based on each potential director’s ability to add value to the company using his/her skills and knowledge (Bohren and Strom, 2010).

Despite the above divergences in literature, influence of gender diversity and the contribution of female directors in the EAC cannot be ignored. While some commentators consider the presence of female directors as merely philanthropic; aimed at a public relations exercise for gender equality (Kanter, 1977), others acknowledged gender as one of the main drivers to improved company performance (Bohren and Strom, 2010; Giovinco, 2014). The EAC member countries are not mandated to have a gender quota in their board rooms, though it’s highly recommended by the EAC’s corporate governance codes (CMA, 2002).

East African community regional economic integration policy

The EAC was formed in 1917 as a customs union by Uganda and Kenya and was later joined by Tanzania in 1927, before its break up in 1977. The EAC was reinvigorated by 1993 agreement between Kenya, Uganda and Tanzania, which created the Permanent Tripartite Commission for East African Co-operation. In April 1997, Kenya, Uganda and Tanzania entered an agreement to establish the EAC, a process that took three years before the November 1999 treaty, which established the current East African community. The November 1999 treaty became effective in July 2000 after its ratification by Uganda, Tanzania and Kenya in 2010, the EAC- Common Market was operationalised. Currently, Membership of the EAC- Common Market

includes Kenya, Uganda, Tanzania, Rwanda, Burundi and South Sudan.

The Common Market status has changed the mode of operation of most listed companies to match the best practices within the region, moreover most EAC listed companies are required to apply similar standard governance doctrines and equal treatment of all member states' citizens without discrimination.

Aims of this study

The main objective of this study was to examine the influence of gender diversity on the financial performance of listed companies following the operationalisation of the EAC Common market in 2010. The study addressed the following specific objectives:

- i) Examine influence of gender diversity on performance of EAC's listed companies
- ii) Comparing the influence of gender diversity on company's financial performance, before and after the operationalisation of the EAC- Common Market.

The study is focused on identifying the impact of gender diversity of the board given the recent changes brought about by the operationalisation on the EAC's common market in 2010 and to encourage listed companies, as well as the regulatory authorities, to proactively understand the contribution of gender diversity as an element of good governance frameworks. The findings will thus help in appreciating gender diversity as good corporate governance practices (OECD, 1999, 2004, 2015).

LITERATURE REVIEW

A number of theories have been used in research to explain the relationship between gender diversity and company financial performance. They adopted the agency theory and stewardship theory as commonly used in business and corporate governance research studies (Adams et al., 2011; Ahern and Dittmar, 2012; Giovinco, 2014).

Agency theory

According to the agency theory, the need to separate organisational ownership and control creates an agency relationship, whereby shareholders (principals) contract managers (agents) to run their business on their behalf (Bhaduri and Selarka, 2016; Fama and Jensen, 1983). An agency relationship is thus established due to an organisation's need to ensure independence of organisational control from organisational ownership. According to Jensen and Meckling (1976), a company is a nexus between different company stakeholders with the

principal at one end and an agent on the other. The principal and the agent hence have different rights and responsibilities, which theoretically should complement each other for the economic good of the company. However, the agency theory suggests that managers are selfish beings, inclined to the promotion of personal interests rather than those of the principal, in the process of the company's strategic decision-making. The agency theory hence seeks to resolve such principal-agent conflicts of interest by means of applying strict monitoring and control systems, which aim to restrain subjective management decisions and actions. The principal-agent conflict is further exacerbated by information asymmetry, in that an agent is perceived to have more information than that of the principal, thus creating a moral dilemma which might motivate an agent to pursue personal interests that may be irreconcilable with those of the principal (Bhaduri and Selarka, 2016). Consequently, the principal is forced to incur agency costs, e.g. the monitoring cost (audit fees) to make the agents accountable for their decision-making roles, in an attempt to reduce the agent's extravagances that may harm the principal's economic interests (Jensen and Meckling, 1976).

Typically, company shareholders appoint a board of directors (agents) to oversee the company on their behalf. The board of directors in turn, appoint employees to carry out the day-to-day management of company's undertakings. Shareholders appoint agents to run their business because some companies have hundreds or thousands of shareholders with no skills, knowledge, time or inclination to manage their own investments (Bhaduri and Selarka, 2016). They are therefore willing to engage a professional manager with the skills and knowledge needed to achieve the company's primary objectives of shareholders wealth maximisation (Friedman, 2007). Agents, on the other hand, are willing to offer their skills, knowledge and time in exchange for reward, in pecuniary or no pecuniary terms. This creates multiple goals, and/or lack of goal congruence between the agent and the principal (Jensen and Meckling, 1976). It is in the principal's interest to minimise agency costs, including the manager's rewards, to maximise the company value. However, because of the agents' perceived self-seeking nature, they tend to focus on maximising their personal interests such as remunerations, luxurious offices, personal assistants or even luxury cars (Jensen and Meckling 1976). Consequently, they may not always act in the best interests of the principal, but rather seek to maximise their own utility, which gives rise to principal-agent conflicts (Jensen and Meckling 1976). To mitigate such conflicts, the principal incurs some costs, such as the cost for drawing legal employment contracts that clearly articulates the manager's accountability and responsibility. Other agency costs may include payment reducing the company agency costs and the appointment for the agent's asymmetric information and monitoring of managerial performance e.g. paying for external audits

and review (Bhaduri and Selarka, 2016). Hence, the principal will need to ensure that an appropriate reward scheme is implemented to effectively motivate the agent to act in the principal's best interest. Such initiatives result in additional monitoring costs aimed at mitigating the agent's selfishness at the principal's cost.

The agency theory, hence advocates strict monitoring and control of the agent's activities. This is achievable by putting in place a set of good policies including gender balance of the board as a means of increasing the shareholders' wealth (Grant and McGhee, 2014). This study used the agency theory recommendations to explain the importance of gender diversity of the board as means of enhancing company financial performance. The agency theory has a big influence on corporate governance in the EAC, because corporate governance indicators such as gender diversity enhance the board's ability to monitor and control management decisions.

Stewardship theory

This theory views managers as company stewards who act in the best interest of the shareholders (Donaldson and Preston, 1995). An organisational management is assumed trustworthy and considerate in the use of company resources to increase company profits, which in turn maximises shareholder returns (Davis et al., 1997).

The stewardship theory suggests that shareholder satisfaction in a company's positive performance will subsequently lead to greater levels of satisfaction for its managers. Therefore, a good company performance is looked at as a means of attaining both the shareholders' and managements' satisfaction because the stewards' and shareholders' interests are concurrently maximised (Davis et al., 1997). Consequently, managers are more motivated to maximize the company's financial performance for their reputation's sake, confident that high levels of performance will avail their future career opportunities, than they are motivated to seek shorter-term self-interests which are not likely to benefit owners. In such a case, a consistent and progressive company performance is seen as a good indicator of the management's competence, which is attributed directly to individual employees, the management team or the CEO's performance. This was identified earlier by Fama (1980), who contends that company executives manage not only their company's resources, but also their careers, with a desire to be seen as the most effective and resourceful stewards in a given sector or industry. According to Abdullah and Valentine (2009), the stewardship model is more applicable to the Japanese corporate governance model, with employees assuming the role of stewards. Moreover, the stewardship theory encourages the duality of the CEO as a means of executive directors on company boards as a source of good business practice to enhance the company performance (Clarke, 2004). The stewardship theory has

an immense influence on corporate governance developments and company performance in the EAC especially for SME's and family owned companies where most companies tend to advocate for gender diversity of the boards.

Company financial performance

Financial performance is a term used to measure company monetary results based on its policies and processes (Margolis and Walsh, 2001). Performance can be measured using a financial management tool such as accounting ratios like return on equity or return on assets to measure the extent to which a company has achieved its financial objectives over a period of time (El-Shishini, 2001). According to Lussier (2011), financial performance is influenced by the company's internal and external risk. It is therefore important to strengthen the company's internal control systems to manage and control most of the internal risks. However, the causes of external risk are often beyond the company management's control. For example, external risks can be caused by political, economic, or the social technological factors which are beyond the management's control (Ferreira and Otley, 2009; Lussier, 2011).

They adopted the accounting-based performance measurements that are commonly used in accounting and finance research (Adegbite, 2012a, b; Youssef and Bayoumi, 2015). Accounting-based performance measurements involve the use of the accounting information to assess the extent to which a company has achieved its predetermined performance objectives. As the name suggests, accounting-based performance indicators are used to measure company performance using financial accounting data, mainly from the published company annual reports (Agarwal, 2013; Weber et al., 2012).

METHODOLOGY

Henn et al. (2005), identified two major types of research paradigms that exist in social science research, namely the positivist and the critical or interpretive paradigms. The positivist paradigm is also known as the empiricist, scientific, quantitative or deductive paradigm (Henn et al., 2005). Under this type of paradigm, a researcher is perceived to be independent from the research study, and the behaviour of the person (s) or study group(s) used in the study is explained using only facts and observations (Veal, 2005). The positivist paradigm depends, on the following principal assumptions; firstly, the cause and effect must be identified in order to explain the phenomena and to test a theory; secondly, knowledge is based on what can be tested by observing tangible evidence; and thirdly, a researcher must use a scientific method that emphasises control, standardisation and objectivity (Gill and Johnson, 2010; Henn et al., 2005; Veal, 2005). These assumptions help to clarify the research structure, and help us to carry out research on a large scale with the help of some quantitative statistical data analysis tools (Henn et al., 2005). The positivist paradigm is usually applicable in quantitative research on

a large scale, using theories and hypotheses developed prior to the empirical study (Henn et al., 2005; Veal, 2005). Critical or interpretive paradigm is also known as “qualitative, phenomenological, hermeneutic, inductive, interpretive, reflective, ethnographic or action research” (Veal, 2005:25). It assumes that human behaviour can be studied in the same way as non-human phenomena (Henn et al., 2005). The critical paradigm assumes that the world is socially constructed, and that “the reality studied depends on the actors involved in a given social milieu” (Veal, 2005:24). They relied on the persons being studied to offer their own explanation of the behaviour to be examined in the research, thereby enabling them to achieve deeper understanding of the participants’ point of view (Veal, 2005).

The aim of this study was to examine the influence of gender diversity on the financial performance of listed companies within the EAC. To achieve this objective, they adopted the positivist paradigm and the deductive approach, using quantitative techniques to identify the causes and effects of social phenomena (Collis and Hussey, 2013). This quantitative approach is often used in company performance studies (Alagha, 2016; Heenetigala, 2011; Silva Lokuwaduge, 2011). The authors adopted a deductive approach, in which hypotheses was developed from the review of existing literature, and data were collected and used to confirm or negate the proposed hypotheses. Hypothesis testing in this study is based on secondary data from published statistics and annual reports. The use of a deductive approach and hypothesis testing method is a consistent with a quantitative research approach (Gill and Johnson, 2010) and was adopted in this study due to its advantages over the qualitative approach. For instance, the use of numerical measurement in the quantitative approach makes it easier for research analysis and presentation of results for explanatory purposes. Additionally, the quantitative approach has less bias error than the qualitative approach (Collis and Hussey, 2013). According to Veal (2005), a qualitative approach does not often provide researchers with the same level of rigour as a quantitative approach. The quantitative data in this study was obtained from secondary sources, which is the most commonly used method for obtaining data in the performance of the company research studies (Alagha, 2016; Tshipa, 2015; Silva Lokuwaduge, 2011).

They used secondary data source because the data required for this study was available in annual reports of companies. The use of secondary data is consistent with other accounting, finance research studies, in which researchers clearly stated that they used secondary data saves time and money (Ngwenya and Khumalo, 2012; Okiro, 2014). The type of secondary data used in this study includes journal articles, e-books, press releases and websites, which were used in conducting the literature review on corporate governance and company financial performance. They also obtained financial data from DataStream database. Microsoft Excel and Statistical Package for the Social Science (SPSS) version 23 were used for data handling and analysis. Excel was used for managing and formatting the data, prior to exporting to SPSS for statistical applications. SPSS was used to carry out the preliminary diagnostic tests, Wilcoxon signed-rank test, correlation, and regression analyses. According to Field (2009), SPSS is capable of providing comprehensive outputs for analyses such as descriptive statistics, model analysis, multiple regressions and correlation analysis.

Data collection and sample selection

This study used secondary financial data (dependent variables) from DataStream database while gender diversity data were obtained from published companies’ annual reports and company websites. Gender diversity was measured as the ratio of female directors to total directors. They used Microsoft Excel and Statistical

Package for the Social Science (SPSS) version 23 for data handling and analysis. Excel was used for managing and formatting the data, prior to exporting to SPSS for statistical applications. SPSS was used to carry out the preliminary diagnostic tests, Spearman’s rank correlation and linear regression analyses.

Sampling framework and selection

They adopted non-probability sampling to select 42 out of a total of 108 EAC listed companies. Listed companies were preferred because their information is publicly available and they tend to provide the information necessary to identify their corporate governance structures (Okiro, 2014). The sample was comprised of 30 companies from the Nairobi Securities Exchange (Kenya), 7 from the Dar es Salaam Stock Exchange (Tanzania) and 5 from the Uganda Securities Exchange (Uganda).

Dependent variables

The authors adopted some of the commonly used performance measurement in Corporate governance, business, finance and accounting research, namely, Return on Assets (ROA), Return on Equity (ROE), Tobin Q ratio and Price Earnings Ratio (PER) as our dependent variables (Alagha 2016; Heenetigala 2011; Kiel and Nicholson 2003; Klein 1998; Laing and Weir, 1999; Tshipa 2015; Silva Lokuwaduge 2011).

Return on Assets (ROA)

The ROA ratio measures the efficiency of the company in generating income using its total assets (Lesakova, 2007). It is a financial performance ratio commonly used in assessing companies’ economic health as well as the efficiency of investment portfolios (Basarab, 2010; Lesakova, 2007). According to Ingram and Albright (2006), the ROA ratio links all a company’s annual operations to its investment activities. The ratio also measures the management’s efficiency in the utilisation of company assets (Lesakova, 2007).

The ROA is calculated as:

$$\text{ROA (\%)} = \frac{\text{Year-end profits after interest and tax}}{\text{Total assets at the year-end}}$$

A higher ROA ratio indicates that a company has an enhanced ability to utilise its assets to generate a higher value for its owners (Basarab, 2010; Lesakova, 2007).

Return on Equity (ROE)

The ROE measures company performance using return on investment. It focuses mainly on the management’s ability to earn returns for equity holders in form of profits or financial surplus after deducting all expenses. The ROE was calculated in this study as:

$$\text{ROE (\%)} = \frac{\text{Year-end profits after interest and tax}}{\text{Total shareholders' equity at the Year-end}}$$

Total shareholders’ equity at the Year-end A higher ROE ratio is an indicator of management’s ability to generate extra earnings for shareholders.

Tobin’s Q ratio (TBQ)

TBQ ratio uses market values as a measure of company

performance. It's computed as the ratio of company market value to total book value. A lower TBQ ratio is an indicator of poor market confidence in its equity, which could be attributed to poor governance that reduces company profits (Weir et al., 2002). According to Gross (2007), TBQ ratio is a hybrid measure of performance, that is based on both accounting and market-based data. TBQ is calculated as the ratio of a company's market capitalisation to its total assets (Chorafas, 2004).

$$TBQ = \frac{\text{Year-end market capitalisation}}{\text{Total assets at the Year-end}}$$

According to Leng (2004), the TBQ ratio measures the company's growth prospects due to its asset base. A TBQ value of 1 indicates that the company's market value is equal to the total value of its assets. If the ratio is greater than 1, the company's market value is greater than its asset's book value, and hence management is deemed to have created more value for shareholders (Chorafas, 2004). On the other hand, a TBQ less than 1 indicates that the company's market value is lower than the total value of its assets, which may suggest that the company's market worth is being undervalued (Chorafas, 2004). A lower TBQ value is an indication of poor corporate governance mechanisms, which may negatively affect market perception of the company (Weir et al., 2002).

Price earnings ratio (PER)

The PER is used to estimate the market value of a companies' shares using the year-end share price and earnings per share (EPS) (Bernstein and Wild, 1993). The value of the company's PER depends on its existing corporate governance policy, past performance, future growth potential, and the industry risks (Bernstein and Wild, 1993). For example, when a company has superior past performance results (profitability) and high future growth potential (such as in sales and earnings), it would also have a higher PER than a similar company with poor past performance and low growth potential (Bernstein and Wild, 1993). Equally, a company with good corporate governance policies will attract positive market perception and may be considered less risky than its peers within a same industry. Likewise, high and stable dividend payouts will influence a company's PER because of its market-signalling impact. Consistent dividend payouts are a good signal to the market that a company is both financially strong and committed to rewarding its shareholders (Lease et al., 1999). This study calculated PER using the following formula:

$$PER = \frac{\text{Company's year-end share price}}{\text{Earnings per share (EPS)}}$$

PER is influenced by the company risk, particularly the finance risk or the risk of having debt capital within its capital structure. The presence of debt capital affects both earnings and share price, hence reducing earnings growth. This also increases the risks of bankruptcy and can sometimes affect the company's financial results. Thus, lower leverage is associated with higher PER ratio and vice versa (Bernstein and Wild, 1993).

Hypothesis development

The study's hypotheses rested on the broad assumption that the adoption of gender diversity as one of the codes of corporate governance and best practices is likely to enhance company financial performance (Shleifer and Vishny, 1997). Ford and Richardson (1994) posit, that female directors are more ethical than

their male counterparts, especially in managing company finances while Broadbridge et al. (2006), and Konrad et al. (2008) argued that female directors are more organised, more focused on corporate board business and more likely to objectively query management's actions or the rationale behind management's decisions, than their male counterparts.

This increases company monitoring and controls and hence can lead to the enhancement of company financial performance. According to Melero (2011) and Baglioni and Colombo (2013), gender diversity enhances company monitoring which can result in higher company performance. Moreover Khan and Vieito (2013) assert that presence of female directors leads to better company performance because females are naturally more risk-averse than men, hence companies with female directors are less likely to take high risks in investment decisions such as excessive debt capital or diversification, which may increase agency costs and reduce company value (Niessen and Ruenzi, 2006).

Furthermore, Hambrick (2007) suggests that gender differences in the boardroom influence company financial performance. This can be due to differences in gender cognitive characteristics, as proposed by the upper echelon's theory (Hambrick, 2007). According to the upper echelons theory, female directors are more likely to have different cognitive frames than their male counterparts, which influences the way they perform their board functions (Hambrick, 2007). For instance, female directors, tend to have better talents in marketing and sales (Groysberg and Bell, 2013), which may influence their contribution to the company's profitability. Furthermore, female directors may have different knowledge and experience by virtue of their path to directorships - they are less likely to have been CEOs and are more likely to have come from non-business backgrounds (Hillman et al., 2002; Singh et al., 2008).

According to Kopczuk et al. (2010), recent increases in gender equality at work places, especially in industrialised countries, have generally increased the female purchasing power. Consequently, women's influence and control in household purchasing decisions have drastically increased (Phipps and Burton, 1998). Such responsibility helps women to enhance their knowledge of consumer markets, which may contribute to better board decision-making (Carter et al., 2003). Groysberg and Bell (2013) argued that female directors have more interest in philanthropy and community service, which makes them more likely to consider the interests of all stakeholders, thus increasing company performance. Female directors are more likely to value interdependence, benevolence, and tolerance, which may help to elicit information and stimulate collaboration among board members (Bart and McQueen, (2013).

Within the EAC, gender-diversity of boards is still relatively low; most company boards are still dominated by male directors, as compared to countries with the highest percentage of female directors like Norway (40.1%), Sweden (33.7%) and France (33.5%) (Lee et al., 2015). According to Wachudi and Mboya (2012), the relative rarity of female directors in the EAC can be attributed to the prevalent patriarchal culture in the EAC countries. We used the ratio of female directors to total directors as a measure of gender diversity of the board and hence adopted the following hypotheses to test influence of gender diversity on a company's financial performance.

- i) There is a significant relationship between gender diversity of the board and company financial performance (H_1)
- ii) There has been a significant change in gender diversity after the operationalisation of the EAC- Common Market (H_2).

Regression analysis

The authors adopted the ordinary least squares (OLS) regression to examine the relationship between the dependent and independent

variables. According to Bowerman et al. (2003) the independent variable's estimated coefficients indicates the size of effect that one variable has over the dependent variable. The sign on the coefficient (positive or negative) gives the direction of the effect. A positive coefficient indicates how much the dependent variable is expected to increase when the independent variable increases by one unit, holding other independent variables constant and the reverse is true for the negative coefficient (Tabachnick and Fidell, 2006; Tabachnick et al., 2001). According to Zikmund et al. (2013), OLS regression is considered a straightforward method of statistical analysis which guarantees that the resulting straight line will produce the least possible total error in using X to predict Y. their model was derived using the following equation:

$$Y_i = \beta_0 + \beta_1 X + \varepsilon \quad (1)$$

Where: Y_i = the dependent variable; X = the independent variable; β_0 = intercept; β_1 = slope and ε = error term. The above equation was used to derive equation 2 and the subsequent 4 equations we that were used in this study:

$$Y_t = \beta_0 + \beta_1 B_i + \varepsilon_t \quad (2)$$

Where: β_0 = intercept, β_1 = slope, Y_t represents dependent variable (PER, TBQ, ROE or ROA) at time 't', B_i = board gender diversity, and ε_t represents the margin of error due to other factors outside the model that may influence Y_t . We thus derived the following four model equations used to test the study hypotheses with the help of SPSS version 23.

$$i) ROA_t = \beta_0 + \beta_1 GB + \varepsilon_t \quad (3)$$

$$ii) ROE_t = \beta_0 + \beta_1 GB + \varepsilon_t \quad (4)$$

$$iii) LnTBQ_t = \beta_0 + \beta_1 GB + \varepsilon_t \quad (5)$$

$$iv) LnPER_t = \beta_0 + \beta_1 GB + \varepsilon_t \quad (6)$$

Data analyses were carried out using the macro on HCSE estimators developed by Hayes and Cai (2007) which is known to provide heteroscedasticity-consistent regression results (Hayes and Cai 2007).

RESULTS

The results of this study are discussed below. Table 1, shows the results of Spearman's correlation analysis for the variables used in this study.

According to the results of the Spearman's rank correlation (Table 1), for 2008/2009, the following pair of variables exhibited significant correlation at 1% significance. ROA and ROE had a correlation coefficient of 0.66, PER, TBQ had a correlation coefficient of 0.57, PER, ROA had a correlation coefficient of -0.33, PER, and ROE had a correlation coefficient of -0.39. The spearman's rank correlation for 2013/2014 in Table 1 shows that the following pair of variables exhibited significant correlation at 1% significance: PER and TBQ with correlation coefficient of 0.41, PER and gender diversity of the board with correlation coefficient of -0.29, PER, TBQ and ROA with correlation coefficient of 0.60, TBQ and ROE with correlation coefficient of -0.43, ROA and ROE with correlation coefficient of 0.69. The above

correlation figures indicate lower correlations between the dependent and independent variables and some lack of significant correlations between some variables.

Regression analysis results

They adopted regression to examine the relationship between the dependent and independent variables. The results of the regression analysis are discussed below.

Influence of gender diversity on the ROA

They used ROA to measure the efficiency of the company management in generating profits from company assets. Table 2 presents a summary of the regression results on the relationship between company performance measured by ROA and gender diversity of the board between 2008/2009 and 2013/2014.

The 2008/2009 results show an adjusted R-squared value of 0.30, which indicates that about 30% of the variability in ROA is explained by gender diversity of the board. However, the F test result indicates that Gender diversity does not significantly influence ROA ($F = 1.68$, $p = 0.16 > 0.10$). On the other hand, the 2013/2014 results show an adjusted R-squared value of 0.54, which indicates a better model fit than in 2008/2009. This means that, about 54% of the variability in ROA is explained by gender diversity of the board. None the less, the F test result for the regression model in 2013/2014 indicates that Gender diversity of the board have a statistically significant influence on ROA ($F = 5.85$, $p = 0.00 < 0.01$). This suggests that the gender diversity of the board is more relevant to ROA in 2013/2014 than in 2008/2009.

Influence of gender diversity on the ROE

The ROE represents the net amount of profits created by the company using shareholders' funds (Khatab et al., 2011). Table 3, presents a summary of the regression results on the relationship between company performance measured by ROE and gender diversity of the board between 2008/2009 and 2013/2014.

As shown in Table 3, in 2008/2009, the regression results showed an adjusted R^2 value of 0.21, which suggests that about 21% of the total variability in ROE is explained by gender diversity of the board. The F test result indicated that gender diversity of the board ROE ($F = 1.98$, $p = 0.09 < 0.10$). On the other hand, the results for 2013/2014 presented an adjusted R^2 value of 0.52, which shows a better model fit than 2008/2009. The adjusted R-squared result indicates that during 2013/2014, about 52% of the total variability in ROE could be attributed to gender diversity of the board. The F test result also indicated that gender diversity of the

Table 1. Spearman's rank correlation analysis.

		Correlation coefficient			
		PER	TBQ	ROA	ROE
2008/2009	PER	1			
	TBQ	0.571*	1		
	ROA	-0.325**	0.156	1	
	ROE	-0.393**	0.065	0.662***	1
2013/2014	PER	1			
	TBQ	0.409***	1		
	ROA	-0.239	0.603***	1	
	ROE	-0.121	0.430***	0.687***	1
	GB	-0.288*	-0.244	-0.087	-0.033

Where: *** Significant at 1% level, **Significant at 5% level, * Significant at 10% level. Where: GB = Gender Diversity of the Board, ROA = Return on assets, ROE = Return on Equity, TBQ = Tobins Q Ratio and PER is price earnings ratio.

Table 2. Regression analysis.

	2008/2009			2013/2014		
Dependent variable: ROA	Model fit: R ² = 0.2960 P= 0.1601 F= 1.6809			Model fit: R ² = 0.5426 P= 0.0003 F= 5.8543		
Independent variable	Coefficient	T	P	Coefficient	T	P
Constant	60.843	6.091	0.000	52.834	3.713	0.001
Gender diversity	-0.086	-1.392	0.174	0.025	0.206	0.838

*** Significant at 1% level, **Significant at 5% level, * Significant at 10% level
GB = Gender diversity of the board.

Table 3. Regression analysis.

	2008/2009			2013/2014		
Dependent variable: ROE	Model fit: R ² = 0.2121 P= 0.0997 F= 1.9820			Model fit: R ² = 0.5168 P= 0.0001 F= 6.3576		
Independent Variables	Coefficient	T	P	Coefficient	T	P
Constant	62.223	2.924	0.007	26.876	1.411	0.167
GB	0.045	0.248	0.806	-0.048	-0.292	0.772

*** Significant at 1% level, **Significant at 5% level, * Significant at 10% level
GB = Gender diversity of the board.

board influenced ROE (F= 6.34, p = 0.00<0.01).

Influence of gender diversity on the TBQ

The TBQ is calculated as the ratio of company market value to the total book value (Bhagat and Jefferis, 2005).

Table 4 presents a summary of the regression results on the relationship between company performance measured by TBQ and gender diversity of the board between 2008/2009 and 2013/2014.

According to the regression results in Table 4, the adjusted R-squared value in 2008/2009 was 0.21, which suggests that about 21% of the total variability in TBQ

Table 4. Regression analysis.

	2008/2009			2013/2014		
Dependent variable: TBQ	Model fit: $R^2 = 0.2088$ P= 0.2719 F= 1.3368			Model fit; $R^2 = 0.7368$ P= 0.0000 F= 8.6757		
Independent variable	Coefficient	T	P	Coefficient	T	P
Constant	2.129	1.347	0.188	5.751	4.840	0.000
Gender diversity	-0.004	-0.259	0.798	0.002	0.181	0.858

*** Significant at 1% level, **Significant at 5% level, * Significant at 10% level. GB = Gender diversity of the board.

Table 5. Regression analysis.

	2008/2009			2013/2014		
Dependent variable: PER	Model fit: $R^2 = 0.1834$ P= 0.2402 F= 1.4186			Model fit; $R^2 = 0.4099$ P= 0.0038 F= 3.9907		
Independent variable	Coefficient	T	P	Coefficient	T	P
Constant	3.921	3.312	0.002	52.824	3.713	0.000
Gender diversity	0.003	0.220	0.828	0.025	0.206	0.152

*** Significant at 1% level, **Significant at 5% level, * Significant at 10% level. GB = Gender diversity of the board.

can be explained by gender diversity of the board, board independence, enterprise risk management, board size, total assets and market capitalisation. The F test result indicated that all variables in aggregate do not have a statistically significant influence on TBQ in 2008/2009 ($F = 1.34$, $p = 0.27 > 0.10$). The 2013/2014 results show an adjusted R^2 value of 0.74, which demonstrates better model fit, than 2008/2009. In other words, in 2013/2014 about 74% of the total variability in TBQ can be explained by gender diversity of the board. The F test result also indicated that all variables in aggregate have a statistically significant influence on TBQ ($F = 8.68$, $p = 0.00 < 0.01$). This improvement in the model fit and model significance suggests that gender diversity have more relevance in explaining TBQ in 2013/2014 than in 2008/2009.

Influence of gender diversity on the PER

Table 5 presents a summary of the regression results on the relationship between PER and gender diversity of the board in 2008/2009 and 2013/2014.

The 2008/2009 results (Table 5) show an adjusted R -squared value of 0.18, which means that during 2008/2009, about 18% of the total variability in PER is explained by gender diversity. The F test result indicates that gender diversity does not have a statistically

significant influence on PER ($F = 1.42$, $p = 0.24 > 0.10$). According to the 2013/2014 results (Table 5), the adjusted R -squared value was 0.41, which indicates better model fit than 2008/2009. This shows that about 41% of the total variability in PER in 2013/2014 can be explained by gender diversity of the board. The F test results also indicates that all variables in aggregate have a statistically significant influence on PER ($F = 3.99$, $p = 0.00$).

Summary of results

Table 6 presents the summary of the hypothesis tests results for the hypotheses used in this study.

As indicated in Table 6, the results of the regression analysis were used to explain the relationship between gender diversity of the board and the company financial performance variables (ROA, ROE, TBQ and PER). The findings of this study are structured according to the study's specific objectives mentioned above. Two hypotheses were used in this study to examine influence of gender diversity on company financial performance as well as comparing changes in board gender diversity before and after the establishment of the EAC common market in 2010. As indicated above, an essential finding in this study was that there was no statistically significant relationship between gender diversity and company

Table 6. Summary results from hypothesis testing.

Study hypotheses	Tests results	
	2008/2009	2013/2014
H₁: There is a significant relationship between gender diversity of the board and company financial performance		
GB and ROA	Not supported	Not supported
GB and ROE	Not supported	Not supported
GB and TBQ	Not supported	Not supported
GB and PER	Not supported	Not supported
H₂: There has been a significant change in gender diversity following the operationalisation of the EAC- Common Market		
GB and ROA	Not supported	Not supported
GB and ROE	Not supported	Not supported
GB and TBQ	Not supported	Not supported
GB and PER	Not supported	Not supported

Source: Own source

financial performance. The regression results indicate that gender diversity of the board has no statistically significant influence on any of the company financial performance indicators (ROA, ROE, TBQ and PER). Gender diversity may improve the board's efficiency; however, it does not guarantee a company's superior performance. Hence, a company's financial performance may not be driven by gender diversity of the board but by other factors such as sources of revenue and costs, with revenue depending upon the price and quantity of the goods or services sold (Kotler, 2012).

The findings that gender diversity does not influence company financial performance are consistent with a number of studies (Farrell and Hersch, 2005; Rose, 2007) which discovered no relationship between the presence of female directors on the board and company financial performance. The results are also consistent with Haslam et al. (2010) study, which revealed no relationship between the presence of female directors on the boards in UK and companies' financial performance, as measured by ROA and ROE. Additionally, Ahern and Dittmar's (2012) study discovered that the gender diversity of the board did not statistically influence company financial performance in Norway. This lack of a significant relationship, according to Ahern and Dittmar (2012) was caused by the abrupt introduction and enforcement of the 40% mandatory gender quota system in Norway in 2006, which forced many companies to recruit female directors, regardless of their age or board experience, and hence we concluded that the EAC stock markets appear to attach little value to the gender diversity of boards.

This is attributed to low levels of women participation, in the workforce due to cultural practices such as the primordial African taboo in which women were not allowed to work and men were to provide for the entire

family (Wachudi and Mboya 2012). This stereotype still limits women participation in the workforce in Africa in general and EAC in particular. According to Lituchy et al. (2017), there is as low as 40% of women participation in the workforce in Kenya and Uganda and 20% in Africa with majority of women employed in informal employment.

Conclusion

The findings indicated that gender diversity of the board (H₁) had no statistically significant influence on company financial performance indicators such as ROA, ROE, TBQ and PER. Again, the result of the hypothesis H₂ about changes in gender diversity before (2008/2009) and after (2013/2014) the operationalisation of the EAC-Common market indicated inconclusive results. This study thus recommended that EAC-listed companies adopt a code of best practice that emphasises an increase, rather than a decrease of female board of directors to improve board advisory and monitoring functions which may have a positive contribution to company financial performance.

Despite the statistically insignificant and inconclusive relationships between the gender diversity and company financial performance, the results from each regression model fit reveal that these indicators have become relatively more relevant to company financial performance after the operationalisation of EAC common market in 2013/2014 than in the period 2018/2019 prior to this market integration. Future studies should continue the investigation of these gender diversity, by expanding the research scope to include unlisted companies and other financial and non-financial performance indicators, as well as additional gender diversity to further identify models for determining the impact and significance of

gender diversity of the board on company financial performance, and also changes following the operationalisation of the EAC common market. A longer time lapse for tracking changes in gender diversity after the operationalisation of the EAC common market is also recommended to allow for companies to adequately transit and adapt to the EAC common market framework.

Recommendation

While the results of this study indicated no significant relationship between the gender diversity of the board and company financial performance, extant literature suggests that gender diversity of the board does enhance company performance. For instance, according to Barako and Brown (2008: 321), the presence of female directors increases the board's independence and improves company "disclosure practices" and hence company financial performance, while Adams et al. (2011), contend that gender diversity on boards strengthens their monitoring function because female managers tend to have better monitoring skills. This is because female directors tend to have better knowledge, and stronger academic backgrounds than their male counterparts (Hillman et al., 2002). Moreover, female directors are more likely to have better marketing and sales skills than their male counterparts (Groysberg and Bell, 2013). According to Loyd et al. (2013), female directors tend to engage in deeper discussions and share different knowledge and information, compared to homogeneous boards, so gender-diverse boards are more motivated to engage in deep and extensive discussions for the benefit of company financial performance. Adams and Funk (2012), argue that female directors tend to place higher value on tolerance, benevolence, and interdependence, which may help elicit better information and views, and stimulate teamwork amongst fellow board members. Bart and McQueen (2013) believe that female directors are more likely to adopt a cooperative decision-making approach, which results in fairer decisions when competing interests are at stake, whereas Peterson and Philpot (2007) suggest that male directors are more likely to base their decisions on traditional ways of doing business, and on rules and regulations. Hence, with a gender-balanced board, companies are likely to have a broader understanding of the industry and of their multiple stakeholders (Carter et al., 2003).

Based on the above literature, gender diversity is seen to be a potential contributor to the future financial performance of EAC listed companies, because many countries are now striving to have gender equality. Consequently, many consumers in developing countries attach value to companies that have observed gender equality, which improves their share price. Therefore, based on the above literature, this study recommends an increase in gender diversity of boards in the EAC from the current mean of 10-15% to about 40%, as proposed

by the Norwegian legal and corporate governance system. This will help EAC listed companies to benefit from the female director attributes discussed above, by increasing board independence, directors' broad knowledge, skills and understanding of the industry and of the companies' multiple stakeholders, thereby improving company value.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interest

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