Management accountants' competence, accounting system, organizational structure, and management accountants' expectation gap in Uganda.

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Abstract

Purpose – This study aims to establish the existence of Management Accountant's Expectation Gap and its perceived variability with management accountants' competence, management accounting system and organizational structure. As a corollary, it examines the contribution made by management accountants' competence, management accounting system and organizational structure in closing Management Accountant's Expectation Gap.

Design/methodology/approach – This study is cross-sectional and correlational, and it uses firm-level data that was collected by means of a questionnaire survey from a sample of 242 manufacturing firms in Kampala – Uganda.

Findings – Results suggest that management accountants' competence, management accounting system and organizational structure are significant predictors of Management Accountant's Expectation Gap.

Research limitations/implications – This study focuses on manufacturing firms in Uganda, and it is possible that these results are only applicable to the manufacturing sector. More research is therefore needed to further understand the contribution of management accountants' competence, management accounting system and organizational structure in narrowing Management Accountant's Expectation Gap in other sectors such as the accounting firms.

Practical implications – The results suggest that policy makers prescribe qualifications for management accountants and outlining roles of management accountants in the accountants' act 2013 to ensure that management accountants engage in the right roles thus closing the Management Accountant's Expectation Gap.

Originality/value – According to Budding and Wassenaar (2021) study, there is a Management Accountant's Expectation Gap however, no research has hitherto been undertaken that investigates the individual contribution of Management accountants' competence, management accounting system, organizational structure in closing the gap.

Keywords MAC-Management accountants' competence, MAS-Management accounting system, OS-organizational structure and MAEG- Management Accountant's Expectation Gap

1. Introduction

The aim of this paper is to study the relationship between management accountants' competence, management accounting system, organizational structure and management Accountant's Expectation Gap. Management accountant's role performance of sustaining value and growth in addition to control over the continuity of organization is arguably a valid expectation from stakeholders (Wolf et al 2020). However, there is an ever-widening gap between the management accountants' perception of their roles and what management perceives as important roles of management accountants (Pierce & O' Dea 2003).

Drawing from the most recent research by budding and Wassenaar (2021), management accountant's expectation gap arises where management accountants do not meet the expectations of their stakeholders regarding the way in which they carry out their tasks. Management accountants have been seen to perform traditional roles of book keeping, cost recording, price determination, variance analysis, budgeting and cost volume - profit analysis and presenting accounts (Oppi & Vagnoni, 2020; Ten, 2018; Zainuddin, et al 2016; Sunarni, 2013; Yazdifar and Tsamenyi, 2005). However, management expects management accountants to perform roles such as business advisory, business analyst, performance evaluation and management, risk management, and strategy decision making (Budding & Wassenaar ,2021; Oppi & Vagnoni, 2020; Mishra & Kanti 2011) henceforth this has created a Gap in terms of the roles performed by management accountants. The widening expectation gap has often made management accountants marginalized and many of the organization failures have been blamed on failure of accountants to perform their roles (Maziriri and Mapuranga 2017). Furthermore, the widening expectation gap runs the real risk of management accounting becoming a marginalized discipline-deskilled, decentralized, and ultimately disappearing (Mishra & Kanti 2011) hence the unstable employment market demand for management accountants. On the whole, failure to carry out the expected accountants' roles leads to uninformed decisions which could ignite business failure (Maziriri and Mapuranga 2017). For instance, Maziriri & Mapuranga (2017) indicate that Small Medium Enterprises in South Africa are partly failing due to failure of accountants to perform their intended roles such as business advisory and risk management.

In Uganda, the central bank has over the years lamented on accountants' performance and ineffectiveness (B.O.U Annual Supervisory report, 2020). Further to this, management accountants have failed to perform their core role of cost determination on which prices should be based (Gray and Irons, 2016). As a result, prices have been determined basing on past information and companies have failed to meet their operating costs and eventually collapsed because of low gross profit margin. For instance, Uganda clays failed to meet its operating costs and had reported losses since 2018, with the recent one being a net loss increment from Shs128million in the first half of 2019 to Shs1.4billion in 2020 (khisa, 2020). Other manufacturing companies have been seen closing

operations such as Unga millers which closed its operations in Uganda three years ago as a result of raising costs (Mayemba, 2017). The occurrence of such incidences has raised questions concerning the value of management accountants and as to whether management accountants are performing their roles No wonder, only 30% out of 3,886.40 qualified accountants have been employed (ICPAU, 2019) and other companies have not employed management accountants such as Brookside, Roofings and Alam group (Brookside annual report, 2020: Roofings, 2020 website). It is therefore, an issue for management accountants since the greater the gap of expectations, the lower is the credibility, earning potential and prestige associated with their work (Goretzki & Messner 2018), Whereas there are numerous studies (Epstein & Geiger 1994; McEnroe & Martens 2001; Fadzly & Ahmad 2004; Nguyen & Nguyen , 2020; Adafula, et al. 2019; Salehi, 2020; Best, et al., 2001; Dang and Nguyen 2021; Adafula et al.2019; Olojede et al 2020), about the extent to which auditors meet the expectations of others regarding the way in which they carry out their tasks (known as the audit expectation gap in auditing parlance), according to Budding and Wassenaar (2021) no literature is available on this same question regarding management accountants.

In this study we use the role theory (Fischer, 2010) which comprises of role expectations. Kahn et al., 1964 refer to role expectations as sent role where the managers who transmit the expectations are the role senders and accountants who are exposed to role senders' expectations referred to as the focal person. What they do and what is expected of them shapes the role set of management accountants. Therefore, role theory is a useful tool for examining such issues. According to Borgonovo et al. (2019), the failure of accountants to perform their roles as expected of them by managers may be attributed to inadequate competence among the management accountants. Goretzki & Messner (2018), alluded to the view that competent accountants with professional knowledge, financial analysis and monitoring skills, communication and interpersonal skills and decision making skills may be able to perform their roles as expected. Similarly, organizational structure in terms of decentralization, centralization, formalization and stratification (Erol and Ordu 2018: Ten et al 2018) may be important in explaining management accountants' expectation gap. For example decentralization in terms alignment of management accountants with their managers increases inter sharing of accounting work, close communication and decision making authorities assigned at both top and lower levels promotes coordination among different departments and in turn could improve role performance of management accountants well as formalization considers clarification of roles to be performed by management accountants through well written rules and procedure and stratification which relates to importance assigned to tasks depending on employee rewards. Furthermore, Mia & Winata (2008) argue that the failure of management accountants to perform as expected could be attributed to use of traditional management accounting systems hence the need to advance the

systems used in providing information to management. On the contrary, literature does not empirically test the efficacy of this. Thus, it can be explained that where management accountants are competent and working in an established known organizational structure with management accounting system enables them perform the required roles which narrows the expectation gap.

This paper's remainder proceeds as follows: Section 2 is a literature review in which hypotheses are developed. Section 3 is followed by the methodology adopted for the study. Then results and discussion follows penultimate in Section 4. Finally, the conclusion and implications are presented in Section 5.

2. Literature review

2.1 Theoretical underpinning

This study employed role theory (Fisher, 2010), and contingency theory (Otley,1980) to explain the contribution of management accountants' competence, organizational structure and management accounting systems on narrowing the management accountants' expectation gap.

2.1.1Role theory

According to Katz and Khan 1978; Fisher 2010, role theory is concerned with human behavior regarding roles allocated to individuals in an organization. In management accounting, the theory enlightens the understanding of management accountants' roles by explaining tasks and their influence on decision making, judgement and overall performance (Fisher 2010). A role is defined as a set of activities which influences the behavior and performance of an individual (Fisher 2010). Role theory suggests that roles are determined by role senders who in this case we refer to as managers who transmit role expectations to management accountants also known as focal person. According to Byrne (2010), the theory proposes that managers communicate their expectations to the focal person (role sent) who interpret (role received) and react to the role received (role behavior).

However, the focal person's role performance depends on internal and external factors such as structure, size, system and culture (Kahn *et al.*, 1964). We adopt organizational structure as one of the variables to explain management accountants' expectation gap. The researchers assume that a well-structured organization where management accountants are aligned with their immediate managers and decision making can be made at both levels makes it easy for management accountants to perform their roles while meeting manager's expectations. In the same way, role theory advances the concept of role ambiguity which examines the ability of a focal person (management accountant) to perform roles transmitted to them by managers. Fisher (1978). Byrne (2010), defines role ambiguity as lack of knowledge to perform given roles where individuals are not certain on how to perform the roles. Therefore, role performers require knowledge on roles to ensure performance and conformity to

role expectations. Thus, we adopt management accountants' competence as a variable that explains management accountant's expectation gap. We embraced role theory because of its central focus on roles of individuals in an organization which explains roles performed by management accountants and expectations of managers regarding their roles Byrne (2010). Studies have used role theory to explain roles of employees however there are limited studies on role theory to explain management accountant expectation gap. Additionally, literature reviewed has not considered how to close the expectation gap that exists between management accountants and managers on the roles of management accountants. The study therefore employs the role theory Katz and Khan (1978) because it reflects to the sender and receiver where the receiver in this study is the management accountant whose performance of that role is not correctly perceived by the sender who is the manager. However, role theory does not explicitly explain the effect of management accounting system, organizational structure on management accountants' expectation gap hence the we also adopt the contingency theory

2.1.2 Contingency theory

The relationship between Management accountants' expectation gap and management accounting system can be traced through contingency theory. The theory assumes that the performance of organizations depends on the management accounting systems implemented which must fit within the environmental factors (Otley, 1980; Etemadi et al., 2009 Ghasemi et al. 2019). Additionally, Otley, 1980 argue that aspects of an accounting system which are associated with certain defined circumstances are detected by contingency theory. Chenhall (2003) concisely explains that the term contingency means that something is true only under specific condition. The theory assumes that there is no generally appropriate management accounting system that applies similarly to all organizations in all conditions (Otley,1980). According to Byrne (2010), the nature of management accounting system is contingent upon the environment. Therefore, a management accounting system should be designed to fit the organization context, that way management accountants are able to perform their role of reporting information to management for decision making (Gordon & Narayanan, 1984). Also, Ajibolade, (2013) suggests that based on contingency theory, improving performance of tasks of management accountants requires organizations to adopt appropriate management accounting system design. However, the effectiveness of management accounting system depends on its ability to adopt to environmental changes. In such times of escalations in globalization and technology advancements we assume that technology has an impact on management accounting system hence the need to adopt advanced management accounting systems to achieve organizational goals (Ismail & Isa 2011). Therefore, this study uses the contingency theory to explain the relationship between implementation of advanced management accounting

system and the management accountant's expectation gap. It seeks to discover contingencies relating to the roles of management accountants with the help of an advanced management accounting system. we propose that organizations that adopt appropriate management accounting systems with technology designs guide management accountants while performing their roles for instance they are able to provide broad scope, integrated and timely information to management which enhances decision making.

2.2 Management Accountants' Competence

Researchers employing role theory suggest that one's competence could determine how best one performs their roles (Byrne, 2010). Competence is defined as a set of professional knowledge, financial monitoring and analysis, communication and interpersonal skills (Jachi & Yona 2019) and the ability to use effective approaches to provide information and recommendations for decision-making (Oesterreich & Teuteberg 2019). We therefore construe competence to mean the capability of an individual which is related to superior performance in a role. Borgonovo et al. (2019) indicated that only when management accountants are competent that they ably perform roles required of them by management. The attributes that organizations should look for when hiring management accountants pertain to knowledge, expertise and experience (Harland and Knight 2001). However, Borgonovo et al. (2019) argues that knowledge and understanding alone do not result in competence however it requires accountants to effectively apply relevant skills such as decision-making skills, communication and interpersonal skills. Thus, the level of competence among management accountants enables them perform roles expected of them effectively. Due to the technologically advancing global environment, Oesterreich and Teuteberg (2019), assert that there is need for management accountants to adopt technology and analytical skills which guide them perform roles such as data analysis. Parker (2002) study into the roles expected of management accountants established that management accountant roles were mainly centered on cost/financial control, presenting management accounts and managing budgets, hence little focus and concentration on risk management, strategy planning and performance management which were signaled by corporate management as expected roles of the management accountants. This suggests inadequate competence with in management accountants to take up such roles hence contributing to the widening expectation gap with regard to roles performed by management accountants. Similarly, Oesterreich & Teuteberg (2019) study, identified a skills gap as management accountants lacked the skills such as ICT skills and analytics skills to enable them perform roles expected of them. According to Kartini and Fitria (2020) findings indicate a significant influence between the competence of individuals and performance of their roles. Therefore, it is through the application of competence that management accountants meet expectations of managers through performing the roles to the standard that meets interest of management and those charged

with governance to enhance business decision-making and economic stability and growth (Borgonovo, et al. 2019). The more one approaches their roles with competence the smaller the expectation gap with regard to roles expected of them. we therefore hypothesize that:

H_1: *Management Accountants' competence is positively related to management accountants' expectation gap.*

2.3 Management accounting system

According to Novas et al (2017) defined management accounting system as an internal process which supports collection of information, categorizing and computing to achieve organizational goals other scholars expounded Management accounting system (MAS) from two strands; interactive systems and diagnostic systems (Novas et al.,2017; Agbejule, 2011; Arjaliès and Mundy, 2013) whereas (Chenhall & Morris, 1986; Ghasemi et al. 2019; Chong and Mahama 2014 ; Fuadah et al, 2020) examine MAS as the characteristics of information produced by management accounting systems such as broad scope, timeliness, aggregation, and integration. From the accounting perspective, our study focuses on the MAS system employed in an organization such as interactive and diagnostic system. Interactive system refers to positive forces within the organization that support coordination of activities while diagnostic system examines performances at every stage in an organization within a bureaucratic structure by monitoring actual outcomes with established standards of performance while amending deviations. We believe that organizations that employ interactive systems support innovation within management accountants which enables them come up with new ideas and initiatives to achieve organization's goals and similarly organisations that employ diagnostic system enables management accountants to perform roles in line to set standards. Studies on the relationship between management accounting system and management accountants' expectation gap are remote. Nonetheless, there is some extant literature which shows that well-developed MAS enhances coordination and close interaction among employees which enables accountants approach their tasks with ease (Chenhall, 2003; Soobaroyen & Poorundersing, 2008). According Fiondella et al (2016) in a changing environment there is need for organizations to evaluate and adopt better management accounting systems in order to remain effective. For instance, Oesterreich & Teuteberg (2019) study on the role of business analytics in the controllers and management accountants' competence profiles found that organizations dealing with large volumes of data requires management accountants to engage in data-intensive tasks which can only be achieved with the help of a management accounting system. Given the above discourse, it can be deduced that MAS is paramount in the operations of management accountants. However, none of the above studies has examined the actual contribution of MAS in narrowing the management accountants'

expectation gap. Therefore, in this study, the authors explored whether high-take management accounting systems can enable management accountants perform their roles as expected through interactive and diagnostic structures to close the management accountants' expectation gap.

***H_2**: Management accounting systems are positively related to management expectation gap.*

2.4 Organizational structure

Organisational structure is variously defined (Monavarian, et al., 2007; Ahmady, et al. 2016, Hopper 1986; Sinha, 2017; Erol and Ordu, 2018). The overarching idea in these definitions relates to a process in which work is divided amongst competent people who interact and work together to achieve set objectives. For example, Erol and Ordu (2018) considers organizational structure in terms of centralization, formalization, complexity and stratification. Thus, organizational structure may be understood in terms of centralization, decentralization, formalization and stratification of the organizational functions. Since organizational structure involves managing tasks of different divisions in organizations, it is likely that an appropriate organizational structure can place management accountants in a better position to perform the expected roles. Available literature (Hopper,1986; Holtzhausen, 2002; Pierce and O'Dea, 2003; Zhu et al, 2009; Byrne, 2010; Fischer, 2010) appear to suggest that a relationship exists between the performance of roles by management accountants and their structural position in an organization and reporting relations. But studies on the nature and the actual relationship between organizational structure and management accountants' expectation gap appear less existent.

Recently, Erol and Ordu (2018) have examined organizational structure in terms of formalization and stratification, according to which formalization is the extent to which organizations document and write rules and procedures regarding the roles to be performed by different individuals and stratification being related to the importance attached to the tasks performed depending on the rewards received by these individuals and status in the organization. This means that formalisation guides management accountants in performing allocated roles and overcoming role ambiguity and also that individuals work best in organizations with high stratification because of the rewards and status awarded to them. Following from the study of Erol and Ordu (2018) it can be inferred that a well-established organizational structure ensures clear definition of authority and responsibility channels clearly describing the roles expected of an individual. It is therefore reasonable to test whether organizational structure influences the performance of roles of management accountants while meeting managerial expectations to narrow the management accountants' expectation gap. We hypothesize that;

H_3: *The organizational structure is positively related to management accountants' expectation gap.*

2.5 Control Variables

To ensure valid results, the we considered potential confounding variables. As such Firm size interms of turnover and age of the manufacturing firm, personality characteristics of manufacturing accountants and technology are controlled in this study. Studies conducted by (Kahn *et al.*, 1964; Katz and Kahn, 1978; Sunarni, 2013) indicate that organizational factors such as size influence the role expectations of role senders (management) has of focal person (management accountants). A study by Zare & Flinchbaugh (2019), indicates a link between personality characteristics and employee role performance through creativity and voice. According to the study, employees who are high in openness to experience and highly agreeable people are cooperative, avoid conflict, listen to other's suggestions and perform roles in creative ways. Other studies suggested that technology is a vehicle to deliver expected roles effectively (Zawawi &Hoque, 2010). Therefore, the existence of advanced technologies in an organization enables management accountants perform their roles to the expectations of management which narrows the expectation gap unlike in firms without technology.

3. Methodology

3.1 Design, population and sample

This is a cross-sectional study on manufacturing firms in central region of Uganda which composed of 606 manufacturing firms (Uganda Manufacturer's association website, 2020), Manufacturing firms in central region were used as study population because they can easily be accessed given that there is high concentration in the central with 49.6% of the total manufacturing firms (UMA website, 2020). According to Sunarni (2013), size could influence the role performed by management accountants in the organization therefore the researchers used size to categorize the Manufacturing firms following UMA' classification 2020 to include Corporate (21) Large (58) Medium 1 (158) Medium 11(369) We used stratified random sampling technique to group manufacturing firms into groups referred to as strata from which a total of 242 was obtained using Krejcie and Morgan (1970)

For each target manufacturing firm, either a Chief Executive Officer, Chief Finance Officer or Internal Auditor and management accountant was selected for the survey, giving a total of 324 survey respondents. The respondents are selected by virtue of their position and knowledge (McEvily and Marcus, 2005). Only 162 firms responded to our questionnaire with 324 completed questionnaires. The responses were then aggregated using a company as a breaking variable.

3.2 Measurement of variables, data sources, validity, reliability and management

A closed-ended questionnaire anchored on a four-point likert scale was used with 1=strongly disagree and 4= strongly agree to measure the opinions of management accountants about their roles and role expectations of management accountants.

Table 1. Proportionate stratified sampling.

Firm Size	*No. of manufacturing firms*	*Sample size*	*Response rate*
Corporate	21	9	9
Large	58	23	23
Medium I	158	63	63
Medium II	369	147	67
Total	606	242	162

Source: *Data obtained from Uganda Manufacturers Association, 2020*

For content validity 5 questionnaires were administered to a panel of 5 experts, who were management accountants, chief executive officer, internal auditor and Chief finance officer in the practice and academia rated the relevancy of questionnaire items on a scale ranging from 1 = strongly disagree to 4=strongly agree. The researchers then dichotomized the rating scale through spliting the scores such that: rating scores 1 – 2 =measure not useable, 3–4=measure useable. The CVI was computed by obtaining the proportion of items assessed as useable divided by a total number of items (Amin, 2005). The overall content validity index was 0.916 we tested for reliability using Cronbach's alpha coefficient to establish the reliability of the instrument given that it was the most reliable and commonly used measure of scale (Nunnally, 1978). Cronbach's a coefficient for all study variables was 0.77 and above as shown in Table 3. Nunnally (1978) gives a cut-off alpha coefficient of 0.70 as sufficient.

Table 2. Measurement of variables

Global variable	***Manifest variables***	***Measurement***	***Definition***	***Simple item scale***
Management accountants' competence	Professional Knowledge	Respondents' mean rank of the 6 items of information included in the questionnaire on a four-point Likert scale	This is the ability to demonstrate a proficient level of professional skill in accounting and keep current with developments and trends (Borgonovo et al. 2019)	Accountants have knowledge of the accounting profession
	Financial monitoring and analysis	Respondents' mean rank of the 7 items of information included in the questionnaire on a four-point Likert scale	Financial monitoring and analysis is the ability to monitor and collect data to assess accuracy and integrity (Ramli et al, 2013) Decision making is a process of using effective approaches to choose a course of action (O'Hare et al 2016)	Accountants use sophisticated business analysis tools while performing their roles
	Decision making skills	Respondents' mean rank of the 11 items of information included in the questionnaire on a	Communication and interpersonal relationship skill is the ability to report information prepared to intended users that meet their needs and the ability to establish effective working relationships that foster organizational success (Siriwardane et al, 2014; Byrne, 2010)	Accountants are able to gather all relevant information needed for

	Communication and interpersonal skills	four-point Likert scale Respondents' mean rank of the 6 items of information included in the questionnaire on a four-point Likert scale	ICT skills refer to the ability to use technology to process and report information. (Mgaya and Kitindi, 2008; Oesterreich and Teuteberg 2019)	decision making Accountants Present and defend points of view and outcomes of their own work, verbally, to colleagues, and managers
	ICT skills	Respondents' mean rank of the 7 items of information included in the questionnaire on a		Accountants are able to use relevant software

		four-point Likert scale		
Management accounting system	Diagnostic system	Respondents' mean rank of the 6 items of information included in the questionnaire on a four-point Likert scale	It's a system of control that examines performance by monitoring actual performance with established performance standards while amending deviations (Agbejule, 2011)	The system follows up significant exceptions and deviations in performance of roles.
	Interactive system	Respondents' mean rank of the 8 items of information included in the questionnaire on a four-point Likert scale	A system that provides for innovation, creativity and coordination among individuals while they perform their tasks (Novas, et al. 2017)	The system enables implementation of new ideas and ways for doing tasks
Organizational structure	Decentralisation	Respondents' mean rank of the 6 items of information included in the	A decentralized structure is assessed with regard to physical location of management accountants in alongside the managers they serve Hopper (1980) and the assignment of	Management accountants work together

		questionnaire on a four-pointLikert scale	decision rights to all individuals. (ten et al, 2018)	with Top managers and those charged
	Centralisation	Respondents' mean rank of the 6 items of information included in the questionnaire on a four-point Likert scale	Centralization is explained by the position of MA and intensity of the hierarchical levels in which organizational decisions are taken (Ozer, 2007) This is the extent to which roles of MA are well documented describing the rules and procedures (Boyne et al, 2010) This is related to the importance attached to tasks as a result of rewards towards the MA. (Erol and Ordu 2018)	with governance (hopper 1980) MA are asked for their opinions before implementation of any new decision. There norms that determine what
	Formalisation			
	Stratification			

		Respondents' mean rank of the 5 items of information included in the questionnaire on a four-point Likert scale		accountants should do, when and where (Erol and Ordu 2018) Accountants attach more importance to their tasks depending on the rewards given to them (Erol & Ordu 2018)
Management accountants' expectation gap	Unidimensional variable. This is where various items measure the same ability, achievement or attribute of the variable. (Hattie,1985).	Respondents' mean rank of the 24 items of information included in the questionnaire on a four-point Likert scale	Management Accountants' expectation gap refers to the differences between managers' expectations regarding the role of management accountants and the extent to which these expectations are met (Budding and Wassenaar 2021).	Cost recording (Byrne, 2010)

Source: Primary Data (2022)

Table 3: Content validity of the study

Global Variable	Global variable Content validity index (CVI)
Management accountants' competence	0.891
Management accounting system	0.857
Organizational Structure	0.920
Management accountants' expectation gap	0.916

Source: *primary data (2022)*

Table 4: Reliability of the Instrument

Variables	Number of items	Cronbach's Alpha coefficient (α)
Management accountants' competence	37	.726
Management accounting system	14	.700
Organisational structure	25	.746
Management accountants' expectation gap	24	.708

Source: *Primary Data (2022)*

To reflect a small number of latent variables from the variables enlisted in questionnaire, the authors performed a factor analysis. Dear reader, this study performed factor analysis, here for conceptual considerations, according to which the purpose is essentially data reduction. Items under MAEG, OS, MAC and MAS with a correlation of less than 0.5 were excluded from the rotation Tables 5 to Table 8

Table 5: Rotated Component Matrix for Management accountant competence

Item	1	2	3	4	5
As an accountant in this organisation i prepare reports according to IFRs/IASs and other relevant laws	0.737				
As an accountant in this organisation i critically review accounting standards before applying them	0.727				
As an accountant in this organisation i understand the transaction systems of the organization	0.710				
As an accountant in this organisation i understand the requirements of the profession	0.652				
As an accountant in this organisation i present reports using appropriate formats	0.581				
As an accountant in this organisation i have the ability to analyze complex information	0.566				
As an accountant in this organisation i use techniques (e.g., linear programming and regression) for data analysis		0.614			
As an accountant in this organisation i provide sufficient and appropriate reports to managers such as budget reports		0.609			
As an accountant in this organisation i use advanced business statistical analysis tools in performing my roles		0.602			
As an accountant in this organisation i use techniques (e.g., project evaluation and review technique) for data analysis		0.546			
As an accountant in this organisation i ensure policies and procedures for cost management are adequately followed.		0.501			
As an accountant in this organisation i have ability to analyse large unstructured data sets		0.500			
As an accountant in this organisation i manipulate quantitative data to find problems, their causes and trends			0.814		
As an accountant in this organisation i gather a range of alternative solutions and submit them to management			0.714		
As an accountant in this organisation i actively perform work in teams while performing their tasks			0.693		
As an accountant in this organisation i get involved and know what to do at every step of decision making along with management			0.665		

As an accountant in this organisation i ask for opinions of other departmental heads in my decision making	0.652		
As an accountant in this organisation i ably review a firm's decision problem quickly	0.638		
As an accountant in this organisation i ably gather all relevant information on costs and revenues for decision making	0.582		
As an accountant in this organisation i work alongside management to ensure efficient decisions are made in the firm.	0.567		
As an accountant in this organisation i weigh negative and positive consequences of each alternative option	0.555		
As an accountant in this organisation i think and consider all relevant factors and information before submitting my views to management	0.523		
As an accountant in this organisation i objectively assess situations in order to come to conclusion	0.512		
As an accountant in this organisation i have capability to use both statistical and programming languages when handling large data		0.819	
As an accountant in this organisation i ably interpret information generated from as ERP, CRM or SCM systems		0.784	
As an accountant in this organisation i ably use IT skills effectively such as advanced analytics & programming skills		0.780	
As an accountant in this organisation i ably generate final reports such as budgets using available IT systems		0.772	
As an accountant in this organisation i know how to use company systems such as ERP, CRM or SCM systems		0.744	
As an accountant in this organisation i ably use relevant software as spread sheet, word processing, ERP, SAP, Pastel		0.657	
As an accountant in this organisation i ably to modify computer systems to meet the needs of organisation		0.580	
As an accountant in this organisation i use visual aids when presenting management reports			0.821
As an accountant in this organisation i use visual aids for easy interpretation of reports such as pictures, videos			0.768
As an accountant in this organisation i present and justify points of view and outcomes of own work, verbally to colleagues, clients and managers			0.720
As an accountant in this organisation i present and defend points of view and outcomes of their own work, in writing, to colleagues, clients, and superiors			0.666
As an accountant in this organisation i listen to gain information and to understand opposing points of view.			0.595

Eigen values	6.984	6.924	3.959	2.614	2.105
Percentage of variance	18.876	18.714	10.701	7.064	5.69
Cumulative percentage	18.876	37.59	48.292	55.355	61.046
KMO measure of sampling adequacy					0.798
Bartlett's test of sphericity					4454.218

KEY: 1-Professional knowledge, 2- Financial monitoring & analysis, 3- decision making skills, 4- ICT skills, 5-Communication & interpersonal skills.

Source: *Primary Data (2022)*

Table 6: Rotated Component Matrix for Organisational structure

Item	**1**	**2**	**3**	**4**
In this organisation accountants are aligned in close proximity with their immediate managers	0.683			
In this organisation accountants are asked for their opinions before implementation of any new decision.	0.662			
In this organisation regular meetings are held between managers and accountants to carry out reconciliations and price determination	0.612			
In this organisation accountants are involved in decision making	0.597			
In this organisation the accountant is only accountable to fellow accountant	0.523			
In this organisation accountants consult and work with operational managers		0.694		
In this organisation accountants spear head the determination of product costs		0.686		
In this organisation accountants' opinions matter for implementing new procedures		0.643		
In this organisation accountants' tasks are performed with approval of an upper level managers		0.630		
In this organisation accountants participate in product development		0.580		
In this organisation well-established rules and regulations for administration exist		0.552		
In this organisation accountants make non-routine decisions after approval by top management		0.519		
In this organisation norms that determine what accountants should do, when and where, exist			0.848	

In this organisation accountants understand the procedures laid out while performing their roles			0.752	
In this organisation accountants' behaviours related to the tasks are controlled thoroughly			0.676	
In this organisation disciplinary actions are under taken in line with the regulation			0.661	
In this organisation rules and regulations on operations of work are clear			0.583	
In this organisation accountants are given high level of initiative on which tasks to perform			0.576	
In this organisation official correspondences are conducted according to procedure			0.570	
In this organisation accountants are rewarded based on accomplishment of tasks				0.735
In this organisation in this organisation accountants attach more importance to their tasks depending on the rewards given to them				0.731
In this organisation managers and those charged with governance excise their rights to comment on reports provided by management accountants				0.682
In this organisation there is a difference in rewards given to higher positions and lower positions				0.671
In this organisation accountants receive extra payments for additional work allocated to them				0.539
Eigen values	4.416	4.388	2.990	1.913
Percentage of variance	17.663	17.551	11.962	7.651
cumulative percentage	17.663	35.214	47.176	54.827
KMO measure of sampling adequacy				0.729
Bartlett's test of sphericity				1996.829**

KEY: 1-*Decentralised structure, 2- centralized structure, 3 Formalization , 4- Stratification*

Source*: Primary Data (2022)*

Table 7: Rotated Component Matrix for Management accounting system

Item	**Component**	
	1	**2**
Our management accounting system enables implementation of new ideas and ways for doing tasks	0.778	
Our management accounting system follows up significant expectations and deviations in performance of roles of management accountants	0.776	

Our management accounting system adequately evaluates and monitors subordinates' performance	0.712	
Our management accounting system allows for implementation of new ideas and ways for performing tasks.	0.671	
Our management accounting system allows for performance control without the need for managers' follow up	0.615	
Our management accounting system daily compares the established performance standards with actual outcome	0.600	
Our management accounting system satisfies us		0.815
Our management accounting system enables accountants debate data assumptions and action plans to meet management's expectations		0.791
Our management accounting system is a learning tool which guides accountants in performing their roles		0.728
Our management accounting system allows for the search for innovative solutions in the field of accounting.		0.723
Our management accounting system allows accountants participation, debating and interactions among each other about firms' opportunities and threats.		0.717
Our management accounting system sets medium/long term goals and targets which guide accountants to perform expected roles		0.675
Our management accounting system signals key strategic areas for emphasis while performing their roles		0.658
Our management accounting system greatly involves all subordinates		0.541
Eigen values	4.101	3.092
Percentage of variance	29.296	22.089
cumulative percentage	29.296	51.385
KMO measure of sampling adequacy		0.785
Bartlett's test of sphericity		956.568**

Key: 1-*Diagnostic system 2- Interactive system*

Source: *Primary Data (2022)*

Table 8: Rotated Component Matrix for Management accountants' expectation gap

Item	Components for Roles of management accountants
Storekeeping	0.863
Performance evaluation	0.848
Number-crunching	0.838
Interpreting and presenting management results	0.827
Budgeting	0.813
Provision of timely & relevant information	0.794
Actively performing in teams	0.792
Decision making activities	0.777
Risk assessment and management	0.767
Managing IT systems	0.760
Implementing cost reduction initiatives in the company	0.760
Variance analysis	0.748
Monitoring and measuring results	0.732
Creation of value	0.711
Advising management and those charged with governance	0.680
Working capital and short-term finance management	0.678
Implementing business strategy	0.678
Profit improvements	0.672
Evaluating and correcting actual results	0.625
Cost recording	0.574
Presenting management accounts	0.553
Bean counter	0.539
Strategic Planning	0.531
Product quality management	0.500
Eigen values	6.477
Percentage of variance	**70.574**
cumulative percentage	**70.574**
KMO measure of sampling adequacy	**0.828**
Bartlett's test of sphericity	**2310.673**

Source: *Primary Data (2022)*

The data was collected, edited, coded, cleaned and aggregated using a firm as a breaking variable. Data was then analyzed using SPSS version 26, Pearson correlation coefficient was used to establish the relationship between MAC, MAS, OS and MAEG. Regression analysis was also used to establish the extent to which MAC, MAS and OS influence MAEG in manufacturing firms. Prior to carrying out statistical tests, we checked data for normality to determine the applicability of parametric tests using skewness and kurtosis tests. Skewness and kurtosis statistics were within +2 to -2 range as shown in table 9 and the standard errors for each of the variables are not very different from their respective Skewness and kurtosis scores therefore the normality assumption was not violated (Garson, 2012; Field, 2009). To check whether the variance of the outcome variable is the same at all levels of the predictor variable Levene's

test was used given that it is the most commonly used test for each group (Garson, 2012). Our test results were non-significant (p > .05) as shown in Table 10 thus homogeneity of variances not violated. This study further tested for multicollinearity among the predictor variables. Results in table 12 indicate that the correlations do not exceed 0.80 which means that there is no strong relationship between variables hence the multicollinearity assumption is not violated (Field, 2009).

Table 9: Skewness and Kurtosis tests of normality

	Management accountants' competence	Management accounting system	Organisational structure	Management accountants' expectation gap
NValid	162	162	162	162
Missing	0	0	0	0
Skewness	.068	-.032	.0330	-.549
Std. Error of Skewness	.191	.191	.191	.191
Kurtosis	.004	-.039	1.326	.886
Std. Error of Kurtosis	.379	.379	.379	.379

Source: *Primary data (2022)*

Table 10: Test of Homogeneity of Variance

Variables		**Levene Statistic**	**df1**	**df2**	**Sig.**
Management accountants' competence	Based on Mean	1.621	6	145	.145
	Based on Median	1.451	6	145	.199
	Based on Median and with adjusted df	1.451	6	117.997	.201
	Based on trimmed mean	1.603	6	145	.150
Management accounting system	Based on Mean	.359	6	145	.904
	Based on Median	.299	6	145	.936
	Based on Median and with adjusted df	.299	6	132.565	.936
	Based on trimmed mean	.322	6	145	.925
Organisational structure	Based on Mean	.796	6	145	.575
	Based on Median	.562	6	145	.760
	Based on Median and with adjusted df	.562	6	122.251	.760
	Based on trimmed mean	.716	6	145	.637

Source*: Primary data (2022)*

4. **Results and discussion**

Results

The summary descriptive statistics of dependent, independent and control variables are presented in Table 11. Table 11 shows that all means of the study variables range between 3.0347 and 3.2476 with the standard deviations in the range of 0.31109 to 0.37876. Given that deviations are small compared to mean values, it means that data points are close to the means hence the means calculated highly represent the observed data (Nkundabanyanga, 2014; Field, 2009).

Table 11: Descriptive Statistics for Dependent, independent, and control variables

	N	Minimum	Maximum	Mean	Std. Deviation
Management accountants' competence	162	2.23	4.00	3.2229	.33493
Management accounting system	162	2.07	4.00	3.2476	.37876
Organizational structure	162	2.08	4.00	3.0347	.31109
Personality traits	162	1.00	4.00	2.6049	.87305
Turnover	162	.00	1.00	.9198	.27252
Firm age	162	.00	1.00	.8025	.39937
Technology adoption	162	.00	1.00	.1975	.39937
Management accountants' expectation gap	162	1.96	4.00	3.2288	.35420

Source**: Primary data (2022)**

Correlation analysis results.

We present Pearson's correlation coefficient analysis of the study variables. The correlation results in Table 12 revealed a moderate but significant positive relationship between MAC and MAEG (r=.447** and sig. 0.01). Similarly, there is a moderate significant positive relationship between MAS and MAEG (r=.500** and sig. 0.01). There is also a moderate significant positive relationship between OS and MAEG (r=.397** and sig. 0.01). In terms of characteristics, age of a company and MAEG are positively and significantly related (r=.214** and sig. 0.01) while personality traits and MAEG have a weak but positive relationship (r=.171* and sig. 0.05). The relationship of turnover of the company and technology adoption of a company are however not significantly related at a 1 percent level (p<.01)

Table 12: Pearson correlations between the dependent, independent and control variables

	1	2	3	4	5	6	7	8
Management accountants' competence (1)	1							
Management accounting system (2)	.532**	1						
Organisational structure (3)	.266**	.493**	1					
Personality traits (4)	0.035	0.020	0.017	1				
Turnover (5)	0.053	0.129	.158*	0.075	1			
Firm age (6)	0.072	.160*	0.090	-.172*	-0.032	1		
Technology adoption (7)	-.221**	-0.099	-0.030	-0.060	.147*	0.051	1	
Management accountants' expectation gap (8)	.447**	.500**	.397**	.171*	-0.011	.214**	-0.018	1

Notes: *n= 162 *, **Correlation is significant at the 0.05 and 0.01 level, respectively (1-tailed)*

Source: *Primary Data (2022)*

Regression analysis.

The analysis progressed with regression analysis to test the study hypotheses. It first used regression coefficients as indicators of whether the contribution of each variable is significant and the overall contribution of variables is indicated by variance explained (R2) that also shows explanatory power of variables. The results in Table 13 indicate that MAC, MAS and OS predict 36.6 percent of the variance in MAEG (Adjusted R square =.366) With a significant b values of β =.267**, 0.251**, 0.205** the results confirm that MAC, MAS and OS are significantly associated with MAEG at P<.01 respectively. As a means of statistical control and for examining incremental validity, hierarchical regression analysis to assess the individual contribution of independent variables was performed. Variables were entered simultaneously with each hierarchical group (Field, 2009; Aiken and West, 1991) as shown in Table 14.

Model 1-4 shows the standardized β coefficients for the predictor variables. The hierarchical regression results extracted the different models showing their change at every stage of introducing a new variable. Model 1 is the first stage of hierarchy which shows the effect of only control variables (personality traits, firm age, technology and turnover) which do not explain significant variances in MAEG hence, with no confounding effect. Models 2 and 3 introduce MAS and MAC respectively, and reveal both as significant independent variables of MAEG. Fundamentally, model 4 is the general model which shows the combined effect of all the predictor variables (MAC, MAS and OS). The results show that MAC is the most significant predictor variable of MAEG with (standardized β= .282**), followed by MAS which is also significant (standardized β= .235**), and OS which is also significant (standardized β= .233**) Thus, the predictor variables when combined explain 36.6 percent variance in management accountants' expectation gap in manufacturing firms located in Kampala-Uganda. In

conclusion, model 4 is regarded the best and acceptable model because the adjusted R^2 is seen to improve as more predictors are introduced in the model (Field, 2009). Durbin–Watson test was carried out which tests the assumption of independent errors when cases have some meaningful sequence. For this study, the Durbin-Watson statistic was 1.804, which justifies the assumption of independent errors or no serial correlation (Field, 2009).

Table 14: Hierarchical regression results

	Model 1	**Model 2**	**Model 3**	**Model 4**
Constant	2.847	1.525	1.028	0.648
Management accounting system		0.454**	0.325**	0.235**
Management accountants' competence			0.284**	0.282**
Organizational Structure				0.233**
Control variables				
Personality traits	0.214	0.199	0.195	0.194
Turnover	-0.17	-0.90	-0.093	-0.113
Firm age	0.251	0.165	0.164	0.161
Technology adoption	-0.15	0.47	0.093	0.092
Model F	3.908	14.162	14.646	14.257
Adjusted R2	.067	.290	.337	.366
F change	3.908**	50.272**	12.048**	7.974**
R2 Change	0.091**	0.222**	0.050**	0.031**
Durbin-Watson Statistics				1.804
Note **p< .01, *p<.05				

***Source**: Primary data*

Discussion

The results reported in this paper suggest that MAC, MAS and OS are significant predictors of MAEG. This means that competent management accountants with skills such as Professional knowledge, decision making, financial analysis, ICT skills and communication skills are well versed with the roles they are supposed to do and how to perform such roles thus meeting the expectations of managers in terms of the roles performed by these management accountants. The results are consistent with the notion that where management Accountants are competent, management Accountants' expectation gap narrows. Similarly, these findings agree with Oesterreich &Teuteberg (2019), who mentioned that there is a shift in competence profile expected from a management accountant due to technology advancement. Therefore, this paper suggests that management should hire competent management accountants with skills such as Professional knowledge, decision making, financial analysis, ICT skills and communication skills
in order to meet expectations of management in terms of roles performed. The results further suggest that MAS and well-established organizational structure guides management accountants in performing their roles. For instance,

management accounting systems are enabling institutions with mechanisms that coordinate various activities bringing individuals together to discuss and share ideas which eases role performance (Novas et al 2017). This corroborates with Chenhall (2003) who suggests that a well-developed MAS enhances coordination and close interaction among employees which enables accountants approach their tasks with ease. In the same way, results indicated that where management accountants have a clear understanding of the company's structure, they perform roles expected of them with ease. More so, a formalized structure where rules and roles required of management accountants are well documented and stratified where there rewards towards role performance then management accountants will be guided in performing their roles with ease. Therefore, existence of a well-established structure and developed management accounting system enables competent management accountants in performing roles expected of them.

5. **Summary and conclusion**

The purpose of this paper was to examine the contribution made by the MAC, MAS, OS and MAEG. We surveyed 162 manufacturing firms and we find that MAC, MAS and OS are significant predictors of MAEG. Once management accountants are competent and are working in a well-established organizational structure with a well-developed management accounting system they will be able to performs roles expected of them thus narrowing management accountants' expectation gap.

This study offers several implications. We explore the role played by management accountants' competence in narrowing MAEG, meaning that management accountants with skills such as Professional knowledge, decision making, financial analysis, ICT skills and communication skills are well versed with the roles they are supposed to do and how to perform such roles thus meeting the expectations of managers in terms of the roles performed by these management accountants. This study has also established that a well-established organizational structure ensures clear definition of authority and responsibility channels clearly describing the roles expected of a management accountant and further emphasized the need for a well-developed management accountant inorder to narrow MAEG. For policymakers like the Bank of Uganda, the findings of this study will help them in prescribing the qualifications for management accountants. Besides, current regulations such as the Uganda company's act 2012 and Accountants act 2013 should also provide clear guidelines for management accountants other than financial accountants. The results are important to different firms as they are guided on developing clear organizational structure indicating responsibility channels, procedures, well written rules, clearly describing the roles of management accountants and developing a management accounting system to guide management accountants in performing roles expected of them. Despite the contributions and implications, this study focused on manufacturing firms in Kampala – Uganda to determine

the contribution of MAC, MAS and OS to MAEG. It is possible that these results are only applicable to manufacturing firms unlike other sectors. The study also used more of quantitative data which which limits responses of the respondents on study variables and given that it's a cross-sectional study the behaviours of the variables over a long time were not completely analysed which restricts the applicability of the findings as a longitudinal study that could give different results. However, the study clearly brought out the contribution of management accountants' competence, management accounting system and organizational structure in closing the management accountants' expectation gap.

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