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## THE MODERATING EFFECT OF DEMOGRAPHICS AND INSTITUTIONAL CHARACTERISTICS BETWEEN RELIGIOSITY AND COST AND MANAGEMENT ACCOUNTING PRACTICES OF RURAL SMES.

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### Abstract

The main purpose of the study was to evaluate the direct and indirect effects that owner/manager demographic attributes and firm characteristics have on the relationship between religiosity and the two dependent variables, cost accounting and management accounting in Small to Medium Enterprises (SMEs) of subsistence economies. Self-administered survey was used to draw responses from 100 SMEs in Manicaland Province, Zimbabwe. To facilitate the analysis of the data, given the moderation effect that sought to be tested, both IBM SPSS Statistics v26 and the Hayes Process Macro for SPSS were used. The moderation effect was validated through general linear factorial MANOVA. The study provided evidence on the significance of education in moderating the relationship between religiosity and cost and management practices (CMAPS). However, two demographic variables (age and gender) and three firm characteristics (revenue, number of employees and years in business) were not statistically significant and therefore had no interaction effects between these independent and dependent variables. It was recommended to encourage on lifelong learning and education to entrepreneurs as a way of enhancing the use of cost and management accounting practices in subsistence markets so as to boost their financial performance.

**Keywords:** Cost and management accounting practices; religiosity; demographic profiles; firm characteristics

### Introduction

SMEs the world over, have proved to play a pivotal role in economic development. Their contribution to employment creation and poverty reduction is uncontested (International Council of Small Business-ICSB, 2021). Many governments have channelled financial and technical resources to improve the viability of SMEs. To augment this government's objective, cost and management accounting practices (CMAPs), whose role is to facilitate quality decision making, planning, coordination and control are important. Socially, religiosity has demonstrated an extreme influence to humanity. Its impact on personal conduct and other domains of human life has been momentous. Religiosity, as a person's spirituality or belief in the existence and influence of supernatural factors has an impact on a person's life in terms of living, success or failure (Leung, Bond, de Carrasquel, Muñoz, Hernández, Murakami, Yamaguchi, Bierbrauer, and Singelis, 2002). For the purpose of this study, an SME shall be defined using the European Union's 1996 definition where an SME was understood as a firm employing less than two hundred and fifty employees (Commission, 2005).

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Prior research displays minimal attention on how religiosity connects to CMAPs in subsistence markets (Ueda, 2011). Similar to big organisations, Small and Medium Enterprises (SMEs) have to embrace CMAPs to perfect their performance, survive with limited resources and enhance their competitive advantage (Lavia-Lopez and Hiebl, 2015; Bui, Le, & Nguyen, 2020). Non-financial and financial information exhibited by the CMAPs allow firms to successfully fight market rivalry and exhibit superior performance (Ahmad and Zabri, 2016; Reid and Smith, 2002).

SMEs are 90% of firms in the formal and informal sector (International Council of Small Business-ICSB, 2021). In Zimbabwe, SMEs are 70% of businesses contributing 50% to the GDP of the country (Reserve Bank of Zimbabwe, 2021). It is expected that a great deal of these SMEs are in rural areas (Gukurume, 2018). Cost and management accounting practices (CMAPs) have attracted many researchers owing to their importance in the business circles especially in cost control and decision making. However, rural SMEs accounting practices have not attracted the interest of scholars especially in subsistence economies. Additionally, accounting scholars have not embraced behavioural constructs such as religiosity in their researches, relegating these constructs as not relevant in accounting research. However, since CMAPs are a result of human effort, the influence of religiosity cannot go unheeded if an insight on SMEs accounting practices is required. The same sentiments can be said on Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standard for SMEs (IFRS) (Kılıç, Uyar, & Ataman, 2014). Given this background, the study was a response to a dearth in literature on the influence of religiosity on CMAPs in most rural SMEs of developing economies like Zimbabwe.

Most studies have in fact focused on CMAPs of large corporation in developed countries which are already acquainted with this practice (Zaid, Roshaza, Rosliza, & Wan, 2018). This then leaves SMEs in subsistence markets without the necessary attention. This study's main objective was to determine the moderating effects of owner demographic attributes as well as SME

characteristics on the association between religiosity and CMAPs of rural SMEs.

## **Review of Literature and Development of Hypotheses**

### ***Religiosity and its interaction with human life.***

Religiosity can synonymously be referred to as religiousness or simply religion (Wilkes, Burnett, & Howell, 1986). There is no universally agreed definition of religiosity (Fetzer Institute, 1999; Hackney and Sanders, 2003). However, generally, religiosity is understood as the degree of confidence in a particular religious custom and principles by an individual (Delener, 1990; Leung, et al., 2002). It is also argued that religiosity is an interconnected system of beliefs, symbols, norms and values with the aim of bringing that individual nearer to their sacred, super and ultimate power (Koenig, McCullough, & Larson, 2001).

Religion has an impact on accounting due to its ability to influence culture (Lewis, 2001). The behaviour of a human being even at the work place is influenced by the social person (Crutzen and Herzig, 2012; Speckbacher and Wentges, 2012). The social person is made up of three amalgamated features which are the spirit, body and soul (Imran, Binti, Hamid, & Binti, 2017). History indicates the belief that a person's spirituality is like a jacket that can be undressed as soon as one is about to enter the work place (Roundy, 2009). Nevertheless, some researchers have indicated the impossibility of separating spirituality from work life (Imran et al., 2017; Olowookere, 2014; Roundy, 2009). The implication of this is that employee behaviour, interpretation of their job description, assessment and performance of their duties is greatly a result of their religious affiliation, customs and beliefs.

There are three major religions whose spiritual guidelines are strictly adhered to by their followers and these are Christianity, Islamism and Judaism (Olowookere, 2014; Roundy, 2009). Devotion (prayer) has proved to be a

religious element that is most common in religions. Islamic law and morals are directly linked to work as well as business and these philosophies are strictly observed. Hence there is an argument that certain employees' behavioural traits are a manifestation of their religious beliefs in which they will be seeking a reward from their supreme being in their businesses (Salem and Agil, 2012). This idea is supported as an uncontested truth that religion has an impact to human behaviour in every aspect of their lives, be it at home or at their work place.

### **Cost and Management Accounting Practices**

Management accounting is a subdivision of accounting mainly centred on disclosing information that assists in planning, evaluation and control with the aim of producing the greatest possible performance (AlKhajeh and Khalid, 2018; Bui, *et al.*, 2020; Crutzen and Herzig, 2012). On the same note, being able to account for costs entails cost accounting and is a vital tool for business survival. A business' cost accounting practice helps in providing information which will lead to knowledgeable decisions pertaining to make or buy, profitability and competitive selling price to mention just but a few (Horngren, 2009; Uyah, 2010).

### **Importance of CMAPs**

The prevailing business environment, intoxicated by the Covid-19 pandemic, has become very dynamic, associating itself with many different products and putting much emphasis on overheads. Such an overhead intensive cost structure has taken activities as very significant as opposed to the traditional system which held volume with high esteem. It is imperative to epistle that a majority of modern cost and management accounting practices consists of financial as well as non-financial elements. These, when properly applied succours in attaining strategic goals (AbRahman, Omar, Rashid, & Ramli, 2016; Dlamini, 2020; Kaplan, 1984; Zehra and Ahmed, 2019).

2.3. Moderating factors between CMAP and religiosity

### **Gender of the Owner/Manager**

There is a heated debate on the relationship between gender and the implementation of CMAPs or organisational success. However, gender has been observed to be very crucial in determining the operations of a business (Walker and Brown, 2004). Some scholars agree that women do not operate a business at the same wave length with their male counterparts (Isaga, 2015; Woldie, Leighton, & Adesua, 2008). In most cases, business women from an African patriarchal society have multiple roles at work and at home (Mandongwe and Jaravaza, 2020). When they get involved in business, they exert an unequal effort compared to their male counterpart due to family commitments.

However, some studies on male and female managed SMEs revealed that there was no indication that males are better in terms of assessing financial performance when compared with their female counterparts (Johnsen and McMahon, 2005). More so, Collins-dodd, Gordon, & Smart, (2004) concluded that gender has no substantial effect to the performance of business activities. Other variables may be coming into play. From a statistical perspective of 192 countries studied by the Pew Research Centre (2016), women around the world appear to be more religious than men due to the large numbers they hold in every type of religion, be it Islam, Christianity or ATR. It has also been found out that there is no country in which men surpass women in religious affiliation and activities (Pew Research Centre, 2016). We therefore hypothesise the following:

*H<sub>1</sub>*: Gender moderates the relationship between religiosity and cost accounting practices of rural SME owner/managers.

*H<sub>2</sub>*: Gender moderates the relationship between religiosity and management accounting practices of rural SME owner/ managers.

### **Age of the Owner/Manager**

An acrimonious debate concerning the effect of the owner/manager's age on the adoption of CMAPs is at hand. Studies conducted on the effect of the owner/manager's age on the

financial aspects of SMEs concluded that the age of the owner/manager is negatively correlated to the growth of the SME (Isaga, 2015; Woldie, *et al.*, 2008). It therefore implies that the younger owner/managers are characterised by a lot of zeal, extra energy, a lot of commitment and can try by all means to apply the necessary CMAPs in order to succeed. Their older owner counterparts on the other hand, who would have been in business for a long time, would have made it in business and therefore progression will not be all that is important.

However, since experience is the best teacher, there is an opposing group of researchers who argue that older owner/managers, despite lacking more energy, are the best in terms of experience and therefore have a higher potential to apply CMAPs (Cortes, Garcia, & Ramon, 2008). Due to the above conflicting findings some scholars were of the opinion that middle managers are the best in terms of running SMEs through CMAPs (Van Praag, 2003). This is due to their unique qualities of possessing the younger owner/manager's energy and the older owner/manager's experience.

Turning to religion, it has been argued that religion is life and can dictate how one operates in every aspect of life (Albu and Albu, 2012; Kalifa, Triyuwono, Irianto, & Prihatiningtias, 2020, Ueda, 2011). Extensive research by the Pew Research Centre (2016), on 106 countries, indicate that people under the age of forty are less religious than their older equivalents. It is usually believed that as a person gets older, he/she is more grounded into his religious beliefs as a way of life. One may therefore pose the idea that religion can substitute CMAPs.

Basing on this heated debate, the following hypotheses are expressed:

*H<sub>3</sub>*: Age moderates the relationship between religiosity and cost accounting practices of rural SME owners/managers.

*H<sub>4</sub>*: Age moderates the relationship between religiosity and management accounting practices of rural SME owners/managers.

### **Level of Education of the Owner/Manager**

The education level of the owner/manager together with the qualifications and skills of the accounting staff greatly influence the extent of adoption of CMAPs especially in subsistence markets (Albu and Albu, 2012; Butler, Henderson, & Raiborn, 2011; Crutzen and Herzig, 2012). There is a lot of support on the idea that skilled and competent accounting employees in a business produce a very good set of financial records and their financial assessment is marvellous (Al Shanti, 2019; Kosaiyakanont, 2011; Ojua, 2016). From a Malaysia manufacturing company study conducted, it was discovered that there is a positive association between the level of education of employees and the usage of the accounting information systems (Ismail and King, 2007). The implication of this conclusion the right education is important to an SME owners/managers to succeed.

However, from a religious perspective, highly religious individuals are associated with greater dedication to their supreme being (Al Shanti, 2019; Ojua, 2016). They have a proclivity to credit their business success to their supreme power.

Thus, the following hypotheses were formulated:

*H<sub>5</sub>*: Education moderates the relationship between religiosity and cost accounting practices of rural SME owners/managers.

*H<sub>6</sub>*: Education moderates the relationship between religiosity and management accounting practices of rural SME owners/managers.

### **Revenue of the SME**

A number of studies discovered that the revenue of the firm, has a great bearing on the application of CMAPs (Albu and Albu, 2012; Al-Omiri and Drury, 2007; Haldma and Laats, 2002). Larger organisations are usually characterised by a large revenue base and are ordinarily very complex in nature. They are therefore often associated with the recent and highly innovative CMAPs (AlKhajeh and Khalid, 2018; Alsharari,

2019; Dlamini, 2020; Senftlechner and Hiebl, 2015). This implies that companies with a large revenue base are indispensable with CMAPs as opposed to their small counterparts with a limited revenue base.

However, since religion has been found to be a stimulus to human behaviour, it is believed to follow the individual even at the work place and impact on their job performance. It has been found out that some employees even from big companies are affected by their religious practices during employment performance. This is intrinsic religiosity which dictate their daily living (Ueda, 2011). They get into the religion and lives in it.

From this indication, the following hypothesis are claimed:

*H<sub>7</sub>*: Revenue moderates the association between religiosity and cost accounting practices of rural SMEs.

*H<sub>8</sub>*: Revenue moderates the association between religiosity and management accounting practices of rural SMEs.

### **Number of SME employees**

Previous researchers revealed widespread practice of cost and management accounting in organisations with many employees ( Ahmad and Zabri, 2016; Senftlechner and Hiebl, 2015). This category of SMEs is usually non-family-owned SMEs. The increased application of CMAPs in larger companies is attributed to the fact that family-owned businesses often ignore professionalism or strict accounting in their business conduct (Moilanen, 2008). One may assume that the owner/manager from the family business' belief in spiritual intervention may be the reason for ignoring CMAPs.

It has been identified that some businesses with a small number of employees have a high level of trust on each other to the extent that they will not see the need for CMAPs. Also, since family-owned businesses are not mandated to report publicly, CMAPs may be viewed as a waste of time and resources.

Hence the hypotheses can be formulated as follows:

*H<sub>9</sub>*: Number of employees moderate the relationship between religiosity and cost accounting practices of rural SMEs.

*H<sub>10</sub>*: Number of employees moderate the relationship between religiosity and management accounting practices of rural SMEs.

### **Duration of the SME in business**

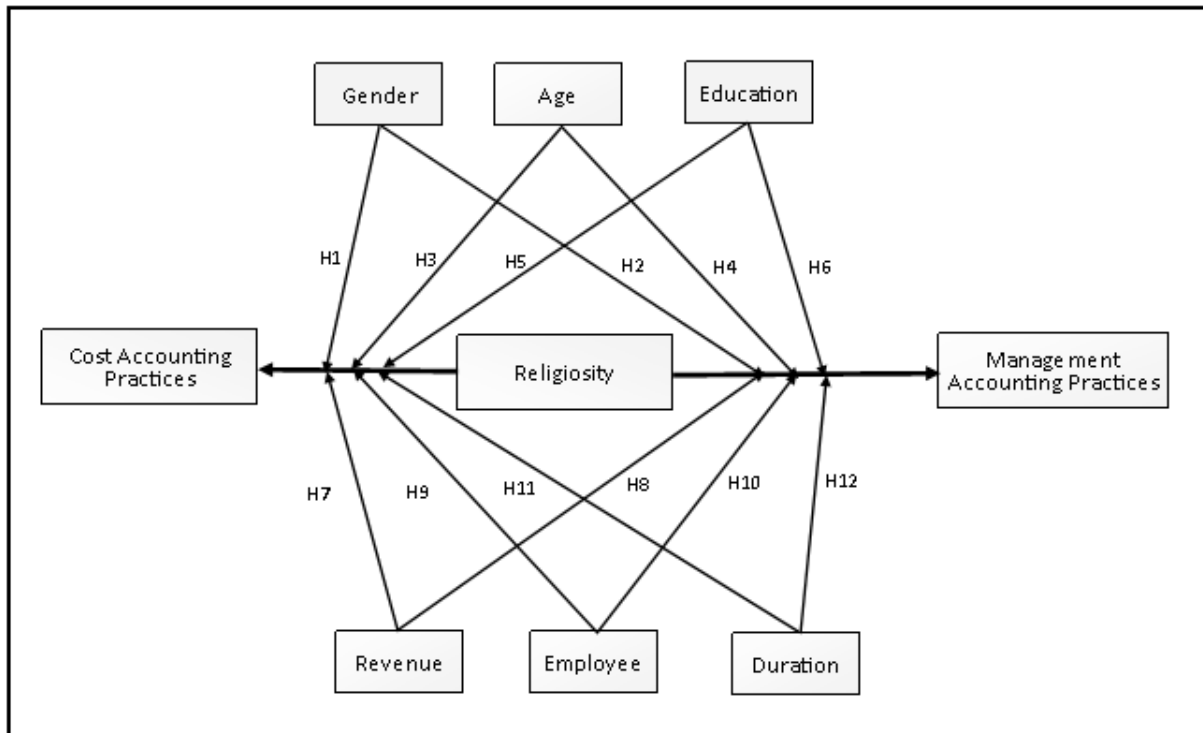
Intrinsic and extrinsic firm characteristics will determine the extent in which an SME may survive in business (AlKhajeh and Khalid, 2018; Valtakoski and Witell, 2018). Its duration in business greatly determines its adoption of the CMAPs and success (Shahzadi, Khan, Toor, & ul Haq, 2018; Essel, Adams, & Amankwah, 2019; Msomi, Ngibe, & Nyide, 2019). Firms that have been in operation for an excess of six years have proved to appreciate the importance of CMAPs (Essel, Adams, & Amankwah, 2019). Young firms (less than 5 years old) find it so challenging to implement CMAPs due to the fact that they usually face financial challenges ( Al-Omiri and Drury, 2007). Their infancy stage in business hinders them access to financial assistance and hence they will fail to institute CMAPs, some of which will be requiring expensive expertise. Fernández-Olmos and Ramírez-Alesón, (2017) argue that there is no need to wait for a mature business stage to implement CMAPs.

From religious spectacles, religiosity helps individuals to find solutions to the problems they encounter in their daily lives (Tsang and McCullough, 2003; Pew Research Centre (2016). Thus, basing on the foregoing, these hypotheses were formulated:

*H<sub>11</sub>*: Duration in business moderates the association between religiosity and cost accounting practices of rural SMEs.

*H<sub>12</sub>*: Duration in business moderates the association between religiosity and management accounting practices of rural SMEs.

The following is the overall theorised model for this study:



**Figure 1: Theorised model**

Source: Researchers' own

## Methodology

The study was guided by a positivist philosophy which holds that the moderation between religiosity and CMAPs can be objectively identified. A quantitative strategy was thus followed in structuring the six moderators of the study model. The study targeted small to medium entrepreneurs in the eastern province of Manicaland in Zimbabwe. To enhance objectivity, the study used the database of registered SMEs which presented a total of 204 SMEs. Using the Morgan (1971) sample size extract, at 95% confidence interval and 5% margin of error the sample size for the study was 132 respondents. Data was collected using a self-administered, structured questionnaire in a once-off cross-sectional survey.

The moderating effect of demographic profiles of entrepreneurs and firm characteristics as well as the direct effect of religiosity on cost and management accounting practices were assessed using Hayes Process Macro in SPSS. According to Jaccard and Jacoby (2010). Moderation effect

was further validated through general linear factorial MANOVA (Jaccard and Jacoby, 2010). The study followed high levels of good research ethics throughout the entire study.

## Results

The study administered a total of 132 questionnaires, yet 100 were returned and validated. That gave a validated response rate of 76%. According to Siti (2013) a response rate of below 50% is unacceptable and response rate above 50% may be validated, whilst response rates above 75% are deemed adequate. To facilitate the analysis of the data, given the moderation effect that sought to be tested, both IBM SPSS Statistics v26 and the Hayes Process Macro for SPSS were used. The results are summarized in the sections below.

### **Demographics and SME Characteristics**

For this study, three firm characteristics and three demographic variables were considered. Gender, age and highest level of education were considered for demographics whilst revenue,

number of employees as well as the duration in business were taken aboard for SME

characteristics. The key findings are summarized in Table 1.

**Table 1: Demographic Distribution**

		Frequency	Percent	Cumulative %	95.0% LCI	95.0% UCI
Gender	Male	53	53.0	53.0	43	63
	Female	47	47.0	100.0	37	57
Age	21 – 30 Years	27	27.0	27.0	19	36
	31 - 40 Years	44	44.0	71.0	35	54
	41 - 50 Years	23	23.0	94.0	16	32
	>50 Years	6	6.0	100.0	3	12
Education	O level	26	26.0	26.0	18	35
	A level	38	38.0	64.0	29	48
	Certificate	30	30.0	94.0	22	39
	Diploma	5	5.0	99.0	2	11
	Degree	1	1.0	100.0		
					0	5
Revenue	< \$240 000	47	47.0	47.0	37	57
	\$240 000 - 1000 000	28	28.0	75.0	20	37
	> \$1000 000	25	25.0	100.0	17	34
Employees	<10 Employees	36	36.0	36.0		
	10 - 20 Employees	36	36.0	72.0	27	46
	21 - 30 Employees	17	17.0	89.0	27	46
	31 - 40 Employees	3	3.0	92.0	11	25
	> 40 Employees	8	8.0	100.0	1	8
					4	15
Duration	< 2 Years	23	23.0	23.0	16	32
	3 - 5 Years	34	34.0	57.0	25	44
	6 - 10 Years	24	24.0	81.0	16	33
	> 10 Years	19	19.0	100.0	12	28

From the foregoing, there was a marginal difference in the distribution by gender, with males being 53% while females were 47%. With respect to the age, the majority of the respondents were middle aged, with the modal age group being those between 31 and 40 years (44%), while those aged between 21 and 30 years were 27%, and those aged between 41 years and 50 years were 23%. With respect to the highest level of education, the majority had attained Advanced level (38%), while those with a certificate were 30%, and those with an Ordinary level were 26%. The majority of the businesses had a revenue of less than \$240,000 (47%), while 28% had a revenue between \$240,000 and \$1,000,000. The least proportion

were those who had a revenue of more than \$1,000,000.

With respect to the number of employees, the modal categories were those who had less than 10 employees and those with 10 to 20 employees, whose proportion was 36% respectively, making a cumulative total of 72%. The third highest category were those who had 21-30 employees, while those with 31-40 employees were merely 3%, and those with more than 40 employees were only 8%. Lastly, with respect to the number of years in operation, the modal category was comprised of SMEs who had been in operation for 3-5 years (34%), followed by those who had been in operation for

6-10 years (24%), while those who had been in operation for less than 2 years were 23%. The least proportion were those who had been in operation for more than 10 years and these were 19%.

**Reliability**

This study comprised of three major constructs and these were cost accounting practices, management accounting practices and religiosity. They were measured by a number of items using the 5-point Likert scale, and were thus latent variables. It was imperative for the reliability of these latent variables to be established, with the minimum acceptable being 0.7 (Carden, Camper, & Holtzman, 2019). The respective reliability tests were done using the Cronbach’s alpha and the results are presented in Table 2.

**Table 2: Reliability Tests**

	Cronbach's Alpha	N of Items
Cost accounting practices	.873	7
Management accounting practices	.803	3
Religiosity	.738	3

From the outcome, the minimum alpha statistic was 0.738 for the construct religiosity, while the highest was for cost accounting practices ( $\alpha = 0.873$ ), and this was followed by management accounting practices ( $\alpha = 0.803$ ). With the alpha statistic being greater than 0.70 in all the outputs, the researchers confirm that the constructs used were reliable.

**Descriptive Statistics**

The descriptive summaries for the three constructs considered in this study are presented in this section. Since the 5-point Likert scale was used, the midpoint that was considered was 3.0, with mean ratings less than 3.0 indicating either infrequent use or general disapproval by the respondents and those above 3.0 indicating frequent use or general approval. Religiosity was measured using four items from the Centrality of Religiosity Scale (CRS) adapted from Huber and Huber (2012). The items for the CMAP were based on a synthesis of items from Drury, Praund, Osborne and Tayles (1993), Lamminmaki and Drury (2001) and Abdel-Kader and Luther (2006).

**Cost Accounting Practices**

Table 3 below summarises the distribution of the responses that measured the extent to which cost accounting practices were being applied.

**Table 3: Cost Accounting Practices**

	N	Mean	SD	Skewness	Kurtosis
Adding mark up to a job cost	100	2.93	1.387	.128	-1.277
Adding mark up to a batch cost	100	2.87	1.353	.066	-1.119
Recording costs of contracts	100	3.24	1.498	-.274	-1.311
Maintaining process costs	100	2.84	1.536	.018	-1.518
Making decisions basing on variable costs	100	3.12	1.499	-.117	-1.473
Making decisions basing on total costs	100	3.29	1.416	-.422	-1.074
Calculating costs basing on activities	100	2.73	1.496	.328	-1.333
<b>Cost Accounting Aggregate</b>	<b>100</b>	<b>2.79</b>	<b>.943</b>	<b>-.551</b>	<b>-.582</b>

The outcome shows a generally poor cost accounting practice, with four of the seven items being rated below the midpoint 3.0. The most frequent practice was the making of decisions basing on total costs ( $M = 3.29$ ;  $SD = 1.416$ ), followed by the recording of costs of contracts

( $M = 3.24$ ;  $SD = 1.498$ ). The third frequent cost accounting practice was making decisions basing on variable costs ( $M = 3.12$ ;  $SD = 1.499$ ). These standard deviations were very high, along with platykurtic distributions, as all kurtoses were negative and this finding shows that there



was no consensus among the respondents. On the other hand, the least frequent cost accounting practice was the calculation of costs basing on activities ( $M = 2.73$ ;  $SD = 1.496$ ), while the second least was the maintaining of process costs ( $M = 2.84$ ;  $SD = 1.536$ ), and the third least practice was adding mark up to a batch cost ( $M$

$= 2.87$ ;  $SD = 1.353$ ). Adding mark up to a job cost was the fourth least rated practice ( $M = 2.93$ ;  $SD = 1.387$ ). The aggregate for the cost accounting practices was  $M = 2.79$  ( $SD = 1.387$ ), and being less than the midpoint, this meant that cost accounting practices were not practiced frequently.

### Management Accounting Practices

The distribution of management practices is presented in Table 4 below.

**Table 4: Management Accounting Practices**

	N	Mean	SD	Skewness	Kurtosis
Budget preparation	100	2.71	1.671	.274	-1.624
Making standard costs and analysing variances	100	2.63	1.649	.351	-1.547
Evaluating a capital investment decision	100	2.51	1.599	.466	-1.409
<b>Management Accounting Aggregate</b>	<b>100</b>	<b>2.62</b>	<b>1.389</b>	<b>.356</b>	<b>-1.163</b>

From the outcome, all the management accounting practices had mean ratings that were less than the midpoint, with the most frequent practice being budget preparation ( $M = 2.71$ ;  $SD = 1.671$ ). Making standard costs and analysing variances was the second frequent management practice ( $M = 2.63$ ;  $SD = 1.649$ ), while the least practiced management accounting practice was evaluating a capital investment decision ( $M = 2.51$ ;  $SD = 1.599$ ). Overall, the aggregate management accounting rating was below the mid-point ( $M = 2.62$ ;  $SD = 1.389$ ), and this shows that the respondents did not practice

management accounting often. Nevertheless, the fact that the standard deviations and kurtoses were very high shows that there were high discrepancies in the responses, suggesting that while the majority tended towards the infrequent practice of management accounting, there were a few who were frequently practicing this.

### Religiosity

The third construct was religiosity, and the summary statistics are presented in Table 5.

**Table 5: Religiosity**

	N	Mean	SD	Skewness	Kurtosis
Influence of religious beliefs to a firms' success	100	4.48	.822	1.658	2.160
Impact of religious commitment to the firm's success	100	4.47	.870	1.738	2.709
Religious sacrifices' link to business performance	99	4.37	1.055	2.025	3.613
<b>Religiosity Aggregate</b>	<b>100</b>	<b>4.44</b>	<b>.704</b>	<b>1.796</b>	<b>3.342</b>

From the outcome above, all the mean ratings were greater than the midpoint and this shows that the respondents did agree on the role of religion towards the success of the business. The

highest rating was that religious beliefs do influence a firms' success ( $M = 4.48$ ;  $SD = 0.822$ ), that religious commitment has an impact on the success of the business ( $M = 4.47$ ;  $SD =$

0.870), and that there is a link between religious sacrifices' and business performance ( $M = 4.37$ ;  $SD = 1.055$ ). On aggregate, the overall rating for religiosity was  $M = 4.44$  ( $SD = 0.704$ ) and being greater than the mid-point, this confirmed that the majority of the respondents did agree on the significant positive role that religion plays towards the performance of the business.

### Testing the Moderation Effect

The study's focus sought to evaluate the direct and indirect effects that demographic attributes have towards the relationship between religiosity and the two dependent variables, cost accounting and management accounting practices. The moderation effect was tested using the Hayes PROCESS Macro for SPSS and the model summary is presented in Table 6.

**Table 6: Moderation Effect Model Summary**

DV	Moderator	R	R-sq	MSE	F	df1	df2	p
CA	Gender	0.204	0.042	0.843	1.462	3	96	0.217
	Age	0.219	0.048	0.874	1.608	3	96	0.193
	Education	0.578	0.334	0.842	9.827	3	96	0.000
	Revenue	0.144	0.021	0.899	0.676	3	96	0.569
	Employee	0.138	0.019	0.900	0.618	3	96	0.605
	Duration	0.133	0.018	0.902	0.578	3	96	0.631
MA	Gender	0.209	0.044	1.902	1.463	3	96	0.230
	Age	0.143	0.020	1.949	0.667	3	96	0.574
	Education	0.621	0.386	1.928	12.341	3	96	0.000
	Revenue	0.096	0.009	1.971	0.300	3	96	0.825
	Employee	0.220	0.048	1.893	1.622	3	96	0.189
	Duration	0.194	0.038	1.799	1.525	3	96	0.219

\* IV = Religiosity

From the above model summary, the highest regression coefficient was observed for the demographic variable education and this was 0.578 for cost accounting practices and 0.621 for management accounting practices. This means that education explains 33.4% of the variation in the significant relationship between religiosity and cost accounting practice ( $F(3, 96) = 9.827$ ;  $p = 0.000 < 0.05$ ). Likewise, education explained 38.6% of the variation in the significant relationship between religiosity and cost accounting practice ( $F(3, 96) = 12.341$ ;  $p =$

$0.000 < 0.05$ ). Nevertheless, the p-values for the other demographic variables were not significant and this suggested that there was no significant moderation effect that was played by gender, age, revenue, employee and duration in business on the link between religiosity and cost accounting practices as well as on the link between religiosity and management accounting practices. The corresponding coefficients are presented in Table 7 below:

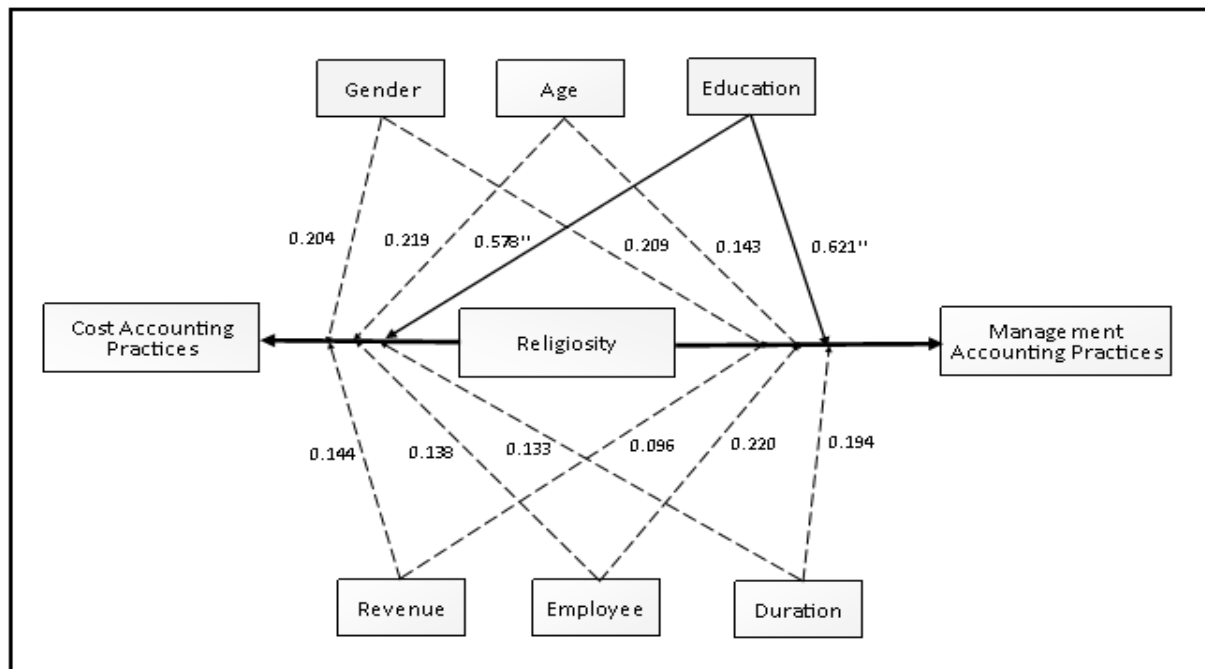
**Table 7: Moderation Effect Coefficients**

DV	Moderator	$\beta$	se	t	p	LLCI	ULCI
CA	Gender	-0.227	0.268	-0.927	0.362	-1.059	0.004
	Age	0.221	0.175	1.264	0.209	-0.126	0.567
	Education	0.849	0.115	6.371	0.000	0.726	0.968
	Employee	0.057	0.116	0.487	0.627	-0.174	0.287
	Revenue	0.058	0.154	-0.372	0.710	-0.364	0.249
	Duration	-0.148	0.121	-1.222	0.225	-0.389	0.093
MA	Gender	-0.751	0.402	-1.868	0.065	-1.549	0.047
	Age	-0.243	0.261	-0.932	0.354	-0.760	0.275
	Education	0.887	0.108	9.426	0.000	0.794	0.996
	Revenue	0.015	0.229	0.063	0.950	-0.439	0.468
	Employee	0.326	0.168	1.937	0.056	-0.008	0.659
	Duration	0.173	0.171	1.012	0.314	-0.167	0.514

\* IV = Religiosity

From the foregoing, again, only the moderator education had a significant moderating effect on the link between religiosity and cost accounting practices ( $\beta = 0.849$  [0.726, 0.968];  $t = 6.371$ ;  $p = 0.000 < 0.05$ ). On the other hand, again, only the moderator education had a significant moderating effect on the link between religiosity and management accounting practices ( $\beta = 0.887$  [0.794, 0.996];  $t = 9.426$ ;  $p = 0.000 < 0.05$ ). Nevertheless, the other moderating variables:

gender, age, revenue, employee and duration were all not statistically significant with p-values being greater than 0.05. In other words, only education played a significant moderating role between the independent variable religiosity and both dependent variables cost accounting practices and management accounting practices. The moderating effects of demographics and SME features are shown in Figure 2:



**Figure 2: Moderating effects of demographics and SME features**

Source: Researchers' own

**Validating the Moderation Effect**

Having established the existence of a moderating effect that education plays on the relationship between religiosity and the two dependent variables cost accounting practices and management accounting practices, the researchers sought to validate this relationship further using the general linear model factorial MANOVA. Nevertheless, to be able to run this

test, according to Field (2016), two key tests needed to be validated and these were the Levene's test of equality of error variances, as well as the Box's Test of Equality of Covariance Matrices. The Box's test, tested the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups. The results for the test for Box's Test of Equality of Covariance Matrices are presented in Table 8.

**Table 8: Box's Test of Equality of Covariance Matrices**

Box's M	13.816
F	2.122
df1	6
df2	1963.001
Sig.	.148
Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.	
a. Design: Intercept + EDU + REL + EDU * REL	

From the outcome,  $F(6, 1963) = 2.122$ ;  $p = 0.148 > 0.05$ . In this regard, because the p-value was greater than 0.05, the assumption was not violated. On the other hand, the Levine's test of

equality of error variances tested the null hypothesis that the error variance of the dependent variable was equal across groups. The results are presented in Table 9 below:

**Table 9: Levene's Test of Equality of Error Variances**

		Levene	df1	df2	Sig.
		Statistic			
Cost	Based on Mean	2.020	3	96	.142
Accounting	Based on Median	3.780	3	96	.013
	Based on Median and with adjusted df	3.780	3	73.922	.014
	Based on trimmed mean	6.351	3	96	.001
Management	Based on Mean	1.597	3	96	.195
Accounting	Based on Median	1.407	3	96	.245
	Based on Median and with adjusted df	1.407	3	78.479	.247
	Based on trimmed mean	1.546	3	96	.208
a. Design: Intercept + EDU + REL + EDU * REL					

From the outcome, cost accounting,  $F(3, 96) = 2.020$ ;  $p = 0.142 > 0.05$  and for the management accounting,  $F(3, 96) = 1.597$ ;  $p = 0.195 > 0.05$ . In both instances, since the p-value was greater than 0.05, it followed that there was not enough statistical evidence to suggest that the error variances were different. In this regard, the

assumption of the equality of error variances was, therefore, not violated. The moderation effect results are presented in Table 10 From the outcome, education had a direct significant relationship with both cost accounting ( $F(1, 96) = 4.158$ ;  $p = 0.044 < 0.05$ ;  $\eta^2 = 0.042$ ) and management accounting ( $F(1, 96) = 31.316$ ;  $p =$

0.000<0.05;  $\eta^2 = 0.246$ ). The direct effect of religiosity was not statistically significant, with  $p>0.05$ . However, the moderating effect EDU\*REL was statistically significant for both cost accounting ( $F(1, 96) = 4.639$ ;  $p =$

0.000<0.05;  $\eta^2 = 0.216$ ) and management accounting ( $F(1, 96) = 4.759$ ;  $p = 0.000<0.05$ ;  $\eta^2 = 0.249$ ). The results are presented in Table 10 below:

**Table 10: Tests of Between-Subjects Effects**

Source	Dependent Variable	DD	df	MS	F	Sig.	Partial Eta Squared
Corrected Model	Cost Accounting	12.044 <sup>a</sup>	3	4.015	5.067	.003	.137
	Management Accounting	95.636 <sup>b</sup>	3	31.879	32.101	.000	.501
Intercept	Cost Accounting	275.100	1	275.100	347.223	.000	.783
	Management Accounting	266.157	1	266.157	268.011	.000	.736
EDU	Cost Accounting	3.295	1	3.295	4.158	.044	.042
	Management Accounting	31.099	1	31.099	31.316	.000	.246
REL	Cost Accounting	.420	1	.420	.530	.468	.005
	Management Accounting	.428	1	.428	.597	.473	.001
EDU * REL	Cost Accounting	3.050	1	3.050	4.639	.000	.216
	Management Accounting	3.059	1	3.059	4.759	.000	.249
Error	Cost Accounting	76.059	96	.792			
	Management Accounting	95.336	96	.993			
Total	Cost Accounting	864.422	100				
	Management Accounting	875.667	100				
Corrected Total	Cost Accounting	88.103	99				
	Management Accounting	190.972	99				

a. R Squared = .137 (Adjusted R Squared = .110)

b. R Squared = .501 (Adjusted R Squared = .485)

Overall, the foregoing findings do confirm that education played a statistically significant moderating role on the relationship between the independent variable religiosity and the two dependent variables cost accounting and management accounting. Basing on the partial eta square and the r-square, it is evident that the moderation effect was stronger for the link with management accounting ( $\eta^2 = 0.249$ ;  $r^2 = 0.501$ ) than for the link with cost accounting ( $\eta^2 = 0.216$ ;  $r^2 = 0.137$ ).

## Discussion

An assessment was done on three constructs cost accounting, management accounting and religiosity. The outcome of descriptive statistics from the *first construct* indicated a generally poor cost accounting practice with high standard deviations among the different cost accounting techniques. It also had platykurtic distributions since all kurtoses were negative. This finding shows that there was no agreement among the

respondents. Basing on the midpoint of 3.0, it was however identified that the most frequent practice was the making of decisions basing on total costs ( $M = 3.29$ ;  $SD = 1.416$ ). The aggregate for the cost accounting practices was  $M = 2.79$  ( $SD = 1.387$ ), and being less than the midpoint, this implies that cost accounting practices were not practiced frequently. Since most of the respondents were not highly educated, the aforementioned outcome is in agreement with the results of Albu and Albu (2012), Adams and Amankwah (2019), Ahmad and Zabri, (2016) as well as Msomi, *et al.* (2019) who concluded that education is crucial in determining the success of an operation.

The *second construct*, management accounting practices was also analysed basing on the same midpoint of 3.0, descriptive statistics were shown. Since the aggregate management accounting rating was below the mid-point ( $M = 2.62$ ;  $SD = 1.389$ ), it is an indication that the respondents did not practice management

accounting often. Nonetheless, the fact that the standard deviations and kurtoses were very high, it is an indication that there were high discrepancies in the responses. The suggestion is that while the majority tended towards the infrequent practice of management accounting, there were a few who were frequently practicing this. Such results were also identified by Zehra and Ahmed (2019) in their Pakistan SMEs study and Bui, *et al.*, (2020) in their Vietnamese SMEs research in which when they all opine that SMEs prefer the conventional MAPs as compared to the recent MAPs.

The *final construct* religiosity was evaluated and all the mean ratings were greater than the midpoint (3.0) and this was a signal that the respondents agreed on the role that religion perform towards the success of the business. The highest rating was that religious beliefs do influence a firms' success ( $M = 4.48$ ;  $SD = 0.822$ ). Such a conclusion was arrived at by many scholars, (Lewis, 2001; Roundy, 2009; Olowookere, 2014), who highlighted that religion has an impact on accounting due to its ability to influence culture.

The study also analysed three firm characteristics and three demographic variables and results confirmed that there was a marginal difference in the distributions by gender. More males were found to be in business than females by 6%. This means that there are more males in SMEs in subsistence economies than females. This observation was supported by other contemporary researchers, (Isaga, 2015; Essel, *et al.*, 2019), who agreed that males produce successful businesses than their female colleagues due to the level of dedication that they exert in the business. That is why they are found in business in large numbers. However, Collins-dodd *et al.* (2004)'s study was in agreement with Johnsen and McMahon (2005) on the notion that gender has no substantial effect on the performance of business activities.

In terms of age, the results indicated that the middle age group surpassed all the ages (with the modal age group being those between 31 and 40 years (44%). This outcome corresponds with the findings of Van Praag (2003) as well as Cortes *et al.*, (2008) who contended that middle owner/managers are the best in terms of running SMEs through CMAPs. This is attributed by

their unique qualities of possessing the younger owner/manager's energy and the older owner/manager's experience. When it comes to education, most of the entrepreneurs had passed Advanced level (38%). This means they had not attained the highest level of education but were average in terms of literacy.

Most businesses studied had less than 10 employees and those with 10 to 20 employees, whose proportion was 36% respectively. This means that most of the SMEs were not very big. With respect to the number of years in operation, the modal category was comprised of SMEs who had been in operation for 3-5 years (34%). This is an indication that most of the businesses were still young businesses.

Hypotheses numbers *one to six* were related to demographic characteristics of the owner/manager of the SME. A test was conducted using the Hayes PROCESS Macro for SPSS to examine the direct and indirect effect that demographic attributes have towards the relationship between religiosity and the two dependent variables, cost accounting and management accounting practices. The summary of results indicate that the highest regression coefficient was observed for the demographic variable education and this was 0.578 for cost accounting practices and 0.621 for management accounting practices. However, the p-values for the other demographic variables were not significant and this suggested that there was no significant moderation effect that was played by gender and age on the link between religiosity and CMAPs. To add on to this, when it comes to the moderation effect coefficients, only the moderator education had a significant moderating effect on the link between religiosity and cost accounting practices ( $\beta = 0.849$  [0.726, 0.968];  $t = 6.371$ ;  $p = 0.000 < 0.05$ .) and similarly, the same moderator education had a significant moderating effect on the link between religiosity and management accounting practices ( $\beta = 0.887$  [0.794, 0.996];  $t = 9.426$ ;  $p = 0.000 < 0.05$ .)

The implication of this outcome is that education greatly moderates the relationship between religiosity and CMAPs. These results are in tandem with Albu and Albu (2012) as well as Essel, Adams and Amankwah (2019) who concluded that education plays a pivotal role in

determining the success of an operation. In the same vein Ahmad and Zabri, (2016) as anchored by Msomi, *et al.*, (2019) actually supported idea that an owner/manager with the relevant expertise and skills has minimum challenges in implementing CMAPs.

Furthermore, when scholars like Isaga (2015) and Woldie *et al.* (2008), studied the effect of age on business success, they found that the age of the owner/manager was negatively correlated to the growth of the SME. This is in disagreement with the findings of this study. On the contrary, Cortes, *et al.* (2008) found out that an older entrepreneur is a perfect match for firm's success due to the experience and challenges that he/she would have encountered which create strength.

Hypotheses numbers *seven to twelve* were linked to firm characteristics of the SME. The Hayes PROCESS Macro for SPSS was also used to evaluate the direct and indirect effect of firm characteristics towards the relationship between religiosity and the two dependent variables, cost accounting and management accounting practices. The results from the Hayes PROCESS Macro for SPSS indicate that there was no substantial moderating effect that was indicated by firm characteristics (revenue, employee and duration in business) on the link between religiosity and cost accounting practices as well as on the link between religiosity and management accounting practices. On the same vein, the moderation effect coefficients revenue, employee and duration in business were all not statistically significant with p-values being greater than 0.05.

This outcome differs from some previous empirical studies on the relationship between revenue and the firm's success and the link with the number of employees (Albu and Albu, 2012; Al-Omiri and Drury, 2007; Ahmad and Zabri, 2016; Dlamini, 2020). Our study also diverged from studies which focused on the association between an SME's duration in business and financial performance, which may include CMAPS; (Shahzadi, Khan, Toor, & ul Haq, 2018; Essel, Adams, & Amankwah, 2019; Msomi, Ngibe, & Nyide, 2019). In summary, all these studies reached the same conclusion that revenue, number of employees and duration in business has an effect on an SME's success encompassing the implementation of CMAPs.

All in all, the study unearthed that basing on the partial eta square and the r-square, it is evident that the moderation effect was stronger for the link with management accounting ( $\eta^2 = 0.249$ ;  $r^2 = 0.501$ ) than for the link with cost accounting ( $\eta^2 = 0.216$ ;  $r^2 = 0.137$ ).

## Conclusion, Limitations and Future Research

### Conclusion

It also sought to evaluate the direct and indirect effects that demographic attributes and firm characteristics have on the relationship between religiosity and the two dependent variables, cost accounting and management accounting practices. The results suggested that education plays a pivotal role in moderating the relationship between religiosity and CMAPs. There was however, no statistical evidence to suggest that other demographic variables (gender and age) or firm characteristics (revenue, number of employees and duration in business) have moderating effect between religiosity and CMAPs.

Overall, the study established the importance of religiosity diversity on CMAPs. This therefore follows that if SMEs aspire to attain high levels of CMAPs, they should have inclusive structures which foster religion as an anchor and driving force for improved accounting standards and compliance. Education moderates the association between religiosity and CMAPs implementation, and therefore for SMEs to attain compliance in good CMAPs, they should embrace educational diversity. Owner/manager training and retraining should be embraced as a culture to enhance their education and CMAPs expertise.

### Theoretical Contribution

The study brings rural CMAPs and religiosity into the accounting literature. Most prior studies were mainly based on developed and emerging economies in urban markets set up but this study extend into a subsistence economy with a unique socio-cultural setting. Previous studies were mainly concerned with the relationship between religion and financial accounting but this study delved on the direct and indirect effects of

demographic attributes and firm characteristics on the relationship between religiosity and the two dependent variables CMAPs.

The study validated religiosity and CMAPs scales in subsistence market in Sub-Saharan Africa. This was done using the general linear model factorial MANOVA. In order to be able to run this test, according to Field (2016), two key tests were validated and these were the Levene's test of equality of error variances, as well as the Box's Test of Equality of Covariance Matrices. The Box's test, tested the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups. On the other hand, the Levine's test of equality of error variances tested the null hypothesis that the error variance of the dependent variable was equal across groups.

### **Practical Contribution**

When running SMEs or any other business, it is critical to take into consideration religiosity so as to enhance CMAPs implementation. Education needs to be considered when driving CMAPs using religiosity. However, other demographic variables like age and gender may not be necessary for the success of the enterprise. Financial institutions may not need to assess these when evaluating potential entrepreneur loans or bank overdraft applicants.

### **Limitations and Future Research**

This study was performed only on rural SMEs hence the results cannot be generalised on urban SMEs. Future studies on the link between religiosity and CMAPs using different methodology is necessary for example using ethnography especially on demographic variables like age and gender. This is suggested due to the fact that results of this research are inconsistent with prior researches which stated that demographic variables have an impact on accounting (Albu and Albu, 2012; Al-Omiri and Drury, 2007a; Ahmad and Zabri, 2016). Additionally, personality traits may also be assessed to bring out a comprehensive model to identify CMAPs in SMEs of subsistence economies. Finally, there is need to encourage on lifelong learning and education to entrepreneurs as a way of enhancing the use of

cost and management accounting practices in subsistence markets.

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