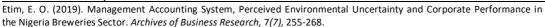
Archives of Business Research - Vol.7, No.7

Publication Date: July. 25, 2019 **DOI:** 10.14738/abr.77.6550.





Management Accounting System, Perceived Environmental Uncertainty and Corporate Performance in the Nigeria Breweries Sector

Etim Osim Etim

Department of Accounting Faculty of Business Administration University of Uyo, Uyo. Nigeria

ABSTRACT

The study examined the effect of Perceived Environmental Uncertainty on the Implementation of Management Accounting Systems on performance of Breweries Companies in Nigeria. Survey design method was adopted to gather data from respondents using structured questionnaire designed using likert-scale. Data were analysed using correlational and inferential statistics. Results shows R² of 0.759 and F-value of 172.88 which provide ample confirmation on the effect of adoption of Management Accounting Systems (MAS) based on Perceived Environmental Uncertainty (PEU) on organizational performance in the Breweries sector of the Nigeria economy following the high correlational positive relationship between the variable studied. It is concluded that adoption of Management Accounting systems based on perceived Environmental Uncertainties has enhanced the performance of the sector when tailored to the level of Environmental Uncertainties facing the Sector: It is recommended that contingent approach should be adopted in designing MAS so as to ensure provision of reliable and relevant information for product cost and pricing.

Keywords: Management Accounting Systems; Perceived Environmental Uncertainties, product cost and product price.

INTRODUCTION

Management Accounting Systems focus on the tracking of costs associated with production of goods and rendering of services in a company. Some of the most common systems include traditional cost accounting, lean accounting, throughput accounting, life-cycle costing, and transfer pricing. Each of these Management Accounting Systems (MAS) provides organizations with a different method of tracking costs in order to produce goods and services at the lowest cost possible. Failing to follow any system can result in overpriced goods and lower gross margins, thereby, reducing the level of company operating profit performance. Management Accounting System is a set of human and capital resources within an organization that is responsible for the production and dissemination of information deemed relevant and reliable for internal decision making.

Belkaoiu (2002) and Horngren(2012) sees Management Accounting System as a formal mechanism for gathering, organizing and communicating information about the organization activities. Rasid, Isa and Ismail (2014) interpreted it as the systematic use of management accounting to achieve organizational goal.

The generation of relevant and reliable information is characterized by high level of environmental uncertainty expressed as Perceived Environmental Uncertainty (PEU) due to the dynamic nature of modern business environment. Perceived Environmental Uncertainty (PEU) is described as the inability to predict correctly certain situations in the environment – internal and external. These may present itself in terms of task uncertainty, diversity of

decisions, difficulties in predicting events, complexity of planning and control activities and the extent of lead time (Morris, 1986; Chenhall, 2003; and Lawrence and Lorch, 2011). PEU has been seen as an important factor that could affect the extent to which managers would require management accounting system information. The higher the level of PEU, the greater the amount of information that the manager has to process to be able to achieve a particular level of performance.

Management Accounting Systems possessed four basic features of broadness in scope (that is, futuristic information, external information and qualitative information, availability on time, aggregation and integration) and at the same time incorporates the characteristics of a traditional type management accounting information (Gordon, 1984; and Mia, 2002, Chenhall, 2003). Thus, a sophisticated and dynamic MAS would be future oriented, external, qualitative, timely, aggregated and integrated as this is necessary to cope with PEU which is a feature of contemporary business environment. The unpredicted events requires aggregated and integrated MAS information that equip the managers with an overall aggregated view of the business and the interrelationships between the component activities of the business (integrated) such as marketing, wages, sales, finance, controls, research and development and so on.

More specifically, the application and design of MAS in various organizations is attributed to contingency factors. Otley (1980) identified three of these contingency factors that cause variations in MAS, to include technology, organizational structure and environment; but Chenhall (2003) identified six contingency factors, namely: the external environment, technology (generic and contemporary), organizational structure, company size, strategy and culture.

The diversity and uncertainty of the business climate therefore calls for a sound understanding of the dynamics of MAS information and its interrelationship with PEU if business must succeed and be sustained.

Statement of the Problem.

The emergence of the systems concept in management literature brought about theoretical and empirical efforts been directed towards understanding the nature of organization environment interdependence, sequel to environmental uncertainty with variants of results as to how the performance of business is been affected. More so, most of the studies are conducted in developed economies of the western world. This study therefore seeks to examine the relationship between MAS information and PEU in the Nigeria context with focus on the Breweries sector performance.

Objective of the Study

The main objective of the study is to investigate the effect of perceived environment uncertainty (PEU) on implementation of management accounting systems and companies performance in the Breweries sector of the Nigeria economy.

Research Hypothesis

The research hypothesis for this study stated in null form is: There is no significant effect of perceived environmental uncertainty on the implementation of MAS and organization performance in the Breweries sector in Nigeria.

CONCEPTUAL, THEORETICAL AND EMPIRICAL ISSUES.

Management accounting systems provides information deem relevant for internal decision making (Belkaoui, 2002). Rasid (2014) describe it as the systematic use of management accounting to achieve organizational goals.

The MAS consists of several subsystems which interact and integrate to ensure coherency of the entire organization as complete system aim at achieving it set goal and objectives. The design of MAS must thus take cognizance of the nature of operation, environmental variables, the sector the organization operates (competition), the type of informational needs for management decisions and control as well on the expected level of performance. Conversely, therefore, the more sophisticated the design, the more detailed the information provided and the more frequently the system generates the information. The designs of MAS components in terms of the levels of these characteristics have been associated with company performance (Inegbenebor, 1995; Ajibolade, 2013).

Management accounting system has many advantages to an organization since through an effective MAS, it is possible to enhance the overall performance of the company. Some of the accrued benefits include:

- i. **Increase efficiency of the company:** Companies opt for management accounting as it increase the efficiency of company in resource utilization. It contributes in striving for better performance by evaluating and comparing, thereby making it easy to achieve results, motivating employees for better performance and companywide efficiency.
- ii. **Increases the bar of profitability:** Management accounting includes budgetary control and capital budgeting. The use of this method makes it easier for the company to cut short the extra expenditure for performing vital operations. This indirectly increases the bars of profits for the company, as the company is able to reduce its pricing on the products.
- iii. **Simplifies the decision making:** Managerial decisions and other activities of management require a simplified report of the financial statement of a company. For this action, management accountants create a detailed technical report with simpler interpretations with key facts of the financial statements.
- iv. **Enables the fluctuation of business monetary fund:** one of the essential factors in business is the monetary fund. Management accounting systems enables a control over the fluctuation of this monetary fund by studying the flow of the funds in details. More so, it helps in maintaining the availability of funds during emergency as well as eliminating the any source within the company that misuses the fund.
- v. **Cost Transparency:** In the corporate world, most the costs comes from the Information Technology (IT). The work of management accounting in the firm is to work with the IT department closely. This action ensures a within budget actions and provides cost transparency to the company.

Daft (2010) identifies certain factors affecting management accounting system design. Management accounting uses financial information to implement effective change. Accounting numbers provide objective feedback about profitability and efficiency, and help to identify opportunities and problem areas. To be useful, management accounting systems must accurately reflect company activities, tracking useful information in sufficient detail without taking more time than they worth. The factors explicitly enumerated are: Quality of information to be provided, timeliness of information, availability of resources and effective feedback.

Perceived Environmental Uncertainty

Perceived environmental uncertainty occurs when an organization decision-maker perceive unpredictability in their environment (Agbejule, 2007). This takes place when there is difference between available information and required information. By implication decision-makers perceive uncertainty of the environment when they do not feel confident that they understand the major events or trends happening in the external environment, or when they feel unable to accurately assign probabilities to the likelihood that particular events and changes will occur (Milliken, 1987).

Perceived Environmental Uncertainty (PEU) varies from industry to industry and at different stages of industry lifecycle, just as the level of recognition of the importance of the external environment also varies from company to company accordingly, as does the reaction of companies to their environment (Abels, 2002).

In earlier studies, perceived environmental uncertainty was described from two broad dimensions: variability and complexity (Robbins and Coutler, 2005). Variability describes changes taking place in the environment; if environmental changes are minimal and predictable, it is called a stable environment; if components in an organizations environment are vibrant, unpredictable and changing frequently, it is considered a dynamic environment.

A review of the literature on uncertainty reveals a variety of definitions of the concept. It is seen as lack of information for and knowledge of in decision making (Duncan, 1972; Lawrence and Lorsch, 2011). Uncertainty is equally viewed as a product of unpredictability (Cyert and March, 2013), environmental turbulence (Emery and Trist, 2005), and the complexity of influential variables. The complexity, interrelatedness and inter connectedness of influential variables in the environment call for segmenting the environment for the purpose of analysis (Fahey and Narayanan, 2006). The dimensions of uncertainty therefore include: macroenvironmental uncertainty competitive uncertainty, market (and demand) uncertainty; and Technology uncertainty, (Anderson and Tushman, 2010). These dimensions are relevant for purposeful planning and controlling of organization's activities.

Company Performance

Company performance is the net result of the combined efforts of all individuals and groups in an organization (Khandwalla, 2007). Companies referred to in this study are Brewery companies. The definition of company performance is problematic because it varies depending on the view point upon which it is assessed. For instance, from the society's point of view, performance may be assessed in terms of efficiency of production of products or services needed by the society. From the proprietary point of view, profitability and growth in earnings may be the criteria; while employees may assess performance from what the organization offered them in terms of monetary and non-monetary incentives. Customers may look at performance from product quality, prompt delivery and affordable/competitive prices. Since management must take into account the various expectations of these diverse groups in setting it goals, management's criteria for assessing company performance may be assumed to adequately reflect the concerns of other groups such as the society, employees, suppliers and customers (Khandwalla, 2007). Daft (2007) suggested two measures of economy aspects of company performance from management's view point - return on assets and growth in sales. He however noted that, obtaining accurate data in terms of these measures may prove difficult especially in multi-industry companies and privately-held companies as owners, who are sole gatekeepers to such information on individual companies are very sensitive about releasing any performance related data.

Relationship between management accounting system, perceived environmental uncertainty and performance.

Designing an appropriate strategy requires organizations putting in place a structure (that is, an information processing system, example; management accounting system) capable of accommodating the variability and uncertainty of their environment. Organizational effectiveness is a function of the correctness of 'Fit' between the information system of an organization and its environment (Burns and Stalker, 2001; Hage and Aiken, 2010; and Lawrence and Lorsch, 2011). Conflicting results have been found in this area as to the implication and relationships between the variable under study. Generally, it is believed that low environmental uncertainty encourages the development of mechanistic structures that emphasize formal controls, centralized decision making and specialization of activities (Burns and Stalker, 2001). In an uncertain environment an organic structure, with its low degree of formality, decentralized decision-making and less specialization is best suited. Lawrence and Dyer, 2003; Fredrickson and Mitchell, (2004); Brownnel, (2005); and Miller, (2006), however, found that hostile and turbulent conditions are best served by a reliance on formal MAS. Regardless of performance effect, Lindsay and Rue (1980) and Schrader (1989) found for large and small firms that there is a positive relationship between environmental uncertainty and planning formality.

Theoretical Review

This study hub on contingency theory which according to Emmanuel, Otley and Merchant (1990) is use to study complex relationship between strategic priorities, organizational design and MAS and their impact on organizational performance. This has continued to attract the attention of researchers like Gerdin and Greeve, (2004); Jermias and Garic, (2008); Gordon and Narayanan (1984). The theory, as applied to Management Accounting (MA) has been described as "a major development of the behavioural management accounting research" which seeks to define specific aspects of an accounting system's design that are appropriate for different sets of circumstances. The theory is based on the premise that "there is no universally appropriate accounting system applying equally to all organizations in all circumstances (Emmanuel, *et al*, 1990); implying that as the specific circumstances of an organization alters, so should the MAS adapt if it is to remain effective.

The theory is specifically ideal for this study because Brewery companies in Nigeria are face with the major challenge of globalization as almost all their inputs are imported thereby subjecting them to vagaries of international foreign exchange market that is volatile and uncertain. This is also due to the fact that several dimensions including turbulence, hostility, diversity, complexity and restrictiveness, complexity and dynamism, controllability and uncontrollability affects the Breweries operating environment.

Empirical Review

Several studies have been carried out by different researchers regarding the relationship between management accounting systems, perceived environmental uncertainty and company performance. In a study on the contextual factors that impact on MAS designs in Nigerian manufacturing companies, Ajibolade (2013) noted that strong explanatory power of PEU affect the MAS designs of manufacturing companies. The study did not however examine the effect of the relationships of the variables studied.

Otley (1980) in his study found that hostile and turbulent conditions are best served by a reliance of formal MAS, regardless of the performance effect. Lindsay and Rue (1980) and Schrader (1989), found that there is a positive relationship between environmental uncertainty and planning formality in both large and small firms.

Ronny (2012) concluded from his study that most managers (47.06%) have a high perception about environmental uncertainty and rest (52.94%) is moderate PEU. Most companies (88.24%) acts as defenders and rest (11.74%) as prospectors. 79.41% companies implement MAS at the high intensity while the remaining (20.59%) at the moderate to low intensity. After testing his hypothesis, he arrived at the conclusion that PEU has a significant influence on the implementation of MAS and organizational performance. These results parallel with previous studies such as Seaman and William (2011), Mat (2010), Nimtrakoom and Tayles (2010), Gosselin (2011), Hoque (2011), Abdel-maksoud (2012) and Sandalgaard (2012).

Mia (2002) and Kreitner (2009) highlight that the use of traditional management accounting information in the form of budget reports and variance analysis can be traced back to the origin of accounting systems. It is argued that in the competitive environment, continual use of traditional accounting information could be harmful, since it focuses on historical and financial facts.

Huber (1980) and Moores and Booth (1994) and Davidson and Graffin (2000) argued that the competitive environment creates uncertainty and impact managers' decision-making ability related to increasing sales revenue, reducing costs, improving customer satisfaction and raising employees' morale as well as developing new products, services, processes and markets. MAS provides information to address all the above issues for an organization to stay ahead in complex and competitive environment.

Ajibolade (2013) using technology as a factor along side effect of perceived environmental uncertainty on management accounting systems and corporate performance, reported evidence of a strong moderation influence of the variables studied. The implication is that companies facing high environmental uncertainty and complex technological production processes will likely reap great benefits from using more sophisticated MAS. These will help produce more information for appropriately measuring performance, more detailed product cost information for proper pricing of products and help highlight areas for cost control purpose for increase profitability. The study found no conclusive empirical evidence regarding the relationship between MAS design and level of decentralization. Decentralization although found to be positively correlated with sophistication in MAS design, was not found to moderate the relationship between MAS design and performance.

The relationship between the usage of MAS information and organizational performance can be seen under management accounting and control systems and organizational performance particularly as it has to do with assisting managers in their decision-making and outcomes measured in terms of goals achievement (Otley, 1980; Govindarajan, 1988; Fisher, 1995; Chenhall, 2003; Langfieldsmith, 2003; Ferris and Haskins, 2008). Choe (2004) investigated the relationship between management accounting information and production performance and found positive relationship. Further, Baines and Langfieldsmith (2003) pointed out that an increasingly competitive environment has resulted in an increased emphasis on differentiation strategies giving rise to changes in organizational design, advanced manufacturing technology and advanced management accounting practices. These changes have led to greater reliance on non-financial accounting information, which has a positive effect on performance. Chong and Chong (1997) found MAS played a role in the relationship between strategic choices and performance. Gul (2014) investigated the relationship between MAS and organizational performance and found that positive relationship exist between the variables studies under high level of PEU (Seaman and Williams, 2011; Ajibolade, 2013).

The gap in the literature thus suggest the need for an understanding of the relationship between MAS, PEU and corporate performance since these form the hub of formulating and implementing strategies by organizations.

METHODOLOGY

The study adopts a survey design approach involving use of a questionnaire to elicit responses from the sampled populations of Breweries companies in Nigeria. The companies websites were obtained and copies of the questionnaire mail to them for responses. Judgmental sampling technique was used to select eleven (11) Breweries companies

These are:

- 1. Nigerian Breweries Plc. Lagos.
- 2. Consolidated Breweries Plc. Ijebu-ode, Ogun
- 3. Life Breweries company, Onitsha, Anambra State
- 4. Sona Breweries Plc. Lagos
- 5. Brewtech Brewery Limited, Ojota, Lagos
- 6. Guinness Nigeria Breweries Ikeja, Lagos
- 7. International Breweries Limited Ilesa, Osun State
- 8. Champion Breweries Plc, Uyo, Akwa Ibom State
- 9. International Beer and Beverages Industries Limited, Kaduna
- 10. Standard Breweries Nigeria Limited, Ibadan
- 11. D Explicit Ibadan

Source: Nigerian Business Directory, 2018

A total of 10 copies of the questionnaire were e-mail to each company totaling 110 copies with only 57 copies filled and mailed back representing 52% response rate and used for the analyses. The questionnaire was closed ended four points Likert Scale with strongly agreed, agreed, disagreed and strongly disagreed options weighting 4, 3, 2, and 1 points respectively. These scores were used to determine the criterion mean point of 2.5 (that is: 4+3+2+1/4). Thus the mean response of 2.5 and above was considered as agreed and below considered disagreed. The mined data is then analyzed using Pearson's product moment correlation; a parametric test that seeks to determine the existence or absence of a linear or non-linear relationships between variables, and ANOVA and 't' statistic to validate the hypothesis for the study.

RESULTS AND DISCUSSION

Two simple linear regression models are formulated for the study as follows:

PBC = B_0 + B_1 MAS + e ----- equation 1 MAS = B_0 + B_1 + PEU + e ----- equation 2

Where;

PBC = Performance of Breweries Companies in Nigeria

MAS = Management Accounting System

PEU = Perceived Environmental Uncertainty

 B_0 = Constant term

e = Stochastic error term.

Data Presentation, Calculation of Mean Values and Analysis

The data mined from the questionnaire responses on the variables of study are presented in the tables that follow.

Table 1: Data presentation on Perceived Environmental Uncertainties

S/N	DIMENSIONS	SA	A	D	SD	MEAN	DECISION
1	Government Tax Policies	18	25	8	6	2.66	A
2	Prices controlled by the Government	9	34	9	5	2.67	A
3	Legal regulations affecting the business sector	14	22	12	9	2.48	D
4	Tariffs on imported materials	21	26	7	3	2.79	A
5	Inflation rate	11	29	10	7	2.59	A
6	Exchange rate with the US dollar	12	27	16	2	2.66	A
7	Interest rates	19	26	4	8	2.66	A
8	Economic restructuring	23	24	9	1	2.82	A
9	Labour And union Issues	21	28	5	3	2.82	A
10	Quality of inputs, raw materials and component	15	22	13	7	2.54	A
11	Price of inputs, raw materials and component	19	26	9	3	2.75	A
12	Changes in competitors' prices	26	22	7	2	2.83	A
13	Entry of new firms into the market	21	19	3	4	2.83	A

Source: Field Survey, 2018/Authors computation

From the Table 1 above, result shows that all the dimensions of Perceived Environmental Uncertainties (PEU) are agreed to by the responding companies except for legal regulations affecting the business sector. This may not be unconnected with the fact that Nigerian business laws and regulations are not flexible and easily amended to reflect current realities. Thus the dimension of independent variables used for the study are validated and suited for the study.

Table 2: Data presentation on Management Accounting System/Practices

	Table 2. Data presentation on Management Accounting System/Fractices								
S/N	Management Accounting practice		A	D	SD	Mean	Decision		
1	Formulation of Strategy	25	17	11	4	2.68	Α		
2	Daily cash reconciliation practice	19	24	9	5	2.68	Α		
3	The company has a written accounting	25	32	0	0	3.02	Α		
	policies/procedures								
4	Optimising the use of resources	21	27	5	4	2.79	A		
5	Safeguarding Assets	43	14	0	0	3.03	A		
6	Planning and controlling Activities	27	29	1	0	3.00	A		
7	Decision making	18	22	13	4	2.64	Α		
8	Timely information	22	26	5	4	2.79	Α		
9	Utilization of resources	15	27	7	8	2.61	A		
10	Execution of cost control techniques	26	30	1	0	3.00	A		

Source: Field Survey/Author's computation, 2018.

From the data presented in Table 2, results show that all the companies under study agreed to all the management accounting variables selected for study as all the item had a mean value of above 2.5 acceptance threshold.

Table 3: Data presentation on companies performance.

	The state of the s							
S/No.	Items/Variables	Very	Good	Bad	Very	Mean	Decision	
		good			bad			
1	Return on investment (ROI)	22	27	8	0	2.88	A	
2	Success at operating revenues from new products	9	26	12	10	2.44	D	
3	Reduction in cost of transacting with customers	11	23	14	9	2.45	D	
4	Level of repeat business with valuable customers	27	30	0	0	3.02	A	
5	Return on Equity (ROE)	20	28	8	1	2.84	A	
6	Level of staff commitment	19	24	11	3	2.72	A	

Source: field Survey / Author's Computation, 2018

On the performance variables of the companies as presented in Table 3, the respondents agreed to four (4) and disagreed to two (2) of the items. The mean value for success at generating revenue from new products and reduction in cost of transacting with Customers did not meet the acceptance threshold of 2.5 mean value. The rationale behind these may not be unconnected with the fact that pricing a new product requires the consideration of many variables which also often account for high failure rate of such products. These variables include setting the right price for the product, making it convenient for a wide range of users, poor market segmentation, among others.

Hypothesis Testing and Discussion

The correlation coefficients, ANOVA (F) value, R-square and t-statistics are adopted in addressing the research objective and validating the null hypothesis stated for the study. The regression results are presented in the tables that follows:

Table 4: Model Summary.

Model	R.	R. Square	Adjusted R. Square	Std. Error of the Estimate
1.	.871ª	. 759	.754	.92899

a. Predictor: (Constant), Adoption of Management Accounting System base on PEU **Source: Author's Computations, 2018**

Table 5: ANOVAa

M	odel	Sum of Square	Df	Mean Square	F	Sig.	
1	Regression	149.200	1	149.200	172.880	.000 ^b	
	Residual	47.467	55	.863			
	Total	196.667	56				

- a. Dependent Variable: Company's Performance
- b. Predictors: (Constant): Adoption of Management Accounting System Base on PEU Source: Author's Computation, 2018

Table 6: Standardized	and	unstandardized	coefficients
i abic o. Standardizcu	anu	unsanaaratea	COCINCICIES

Model			standardized Coefficients	Standardized coefficients	t	Sig.
		В	Standard Error	Beta		
Man Acco	nstant) nagement ounting tem Based	1.982	1.499		1.322	.192
On I	PEU	.657	.050	.871	13.148	.000

a. Dependent variable: companies Performance.

Source: Author's Computation, 2018

The result in Table 4 shows the R² (Coefficient of determination) of .759 which means that about 76 percent of the total variation in the companies' performance is influenced by the adoption of management Accounting system practices based on perceived environmental uncertainties (PEU).

The result in Table 5, ANOVA table shows the F-value of 172.88 and p –value .000 indicating that the model is good since p < .05. This means that the effect of MAS on performance was significant. The result also shows a correlation coefficient (R) value of .871 (87.1%) meaning a strong positive relation between the variables studied. The standard error of estimate indicates that, on average, observed performance of Breweries Companies scores deviate from the predicted regression line by a score of .92899. This is attributable to measurement error in independent variables as well as other factors that influence performance of the industry that may not have been considered or captured in our model.

When the predictor variable was analyzed, the relative contribution of Management Accounting System based on PEU show (β = .871) t = 13.148, p (0.05) meaning the variable is a strong predictor of performance of the industry being studied. Thus, the null hypothesis was rejected and the alternative upheld that "There is significant effect of PEU on the implementation of MAS and organizational performance in the Breweries sector in Nigeria. The findings of this study agrees with Choe (2004) whose study found a positive relationship between management accounting system and production performance. The findings also agrees with the position of Ajibolade (2013) that management accounting system help produce more information for appropriately measuring performance, more detailed product cost information for proper pricing of products, which would eventually boost profitability. More so, the findings supports the study of Schrader (1989) which found a positive relationship existing between perceived environmental uncertainty and management accounting system in enhancing good planning and strategies that build company's sustainability.

CONCLUSION AND RECOMMENDATIONS

This research study presents the result on Management Accounting System (MAS), Perceived Environmental Uncertainty (PEU) and corporate Performance in the Breweries sector of the Nigeria economy. The study has provided findings in support of management accounting system in enhancing the performance of the manufacturing Companies in Nigeria, if tailored to the level of environmental uncertainty facing the companies and technological complexity of their production process. The findings confirmed the positive and linear relationship between management accounting system and the organizational performance as it provide information which includes financial and non-financial, internal and external information that permits top management to consider a number of alternative strategies to achieve the optimum results

under perceived uncertainties. It shows that managers acknowledge the uncertainties experienced in their organization and are forced to adapt, develop strategies in order to remain relevant in their business environment and eventually become competitive and maintain growth in performance.

A major implication of these findings for the management of the companies and the designers of management accounting system is that:

- i. Contingency approach should be adapted in designing MAS so as to ensure provision of reliable and relevant information for product costs and pricing.
- ii. MAS must be sophisticated enough to be upto date in capturing developments in the business environment thus making it dynamic in structure and design.
- iii. Regular training and retraining on contemporary MAS techniques should be avail those responsible for design and formulation of strategies and polices for organization to enable a paradigm shift from traditional MAS to modern techniques and procedures.

SUGGESTION FOR FURTHER RESEARCH

This study focus on breweries sector of the Nigerian economy, a wider coverage is advocated for all manufacturing sectors and other service organizations that adapt MAS in their operations.

References

Abdel – Maksoud, A., Abdallah, W., and Youssef. M., (2012). An Empirical Study of the Influence of Intensity of Competition on the Deployment of Contemporary Management Accounting Practices and Managerial Techniques in Egyptian Firms *Journal of Economic and Administrative Sciences*, 28 (2): 84 – 97.

Abels, E. (2002) Hot topics: environmental scanning. *Bulletin of the American Society for information Science and Technology*, 28(3):16-17.

Agbejule, A., and Burrowes, A., (2007). Perceived Environmental Uncertainty, supply Chain Purchasing Strategy, and use of MAS information: *An Empirical Study of Finnish Firm Managerial Auditing Journal*, 22(9):913 – 927.

Ajibolade, S.O., (2013). Management Accounting Systems Design and Company performance in Nigerian Manufacturing Companies: A Contingency Theory Perspective *British Journal of Art and Social Sciences*, 14 (1):228 – 240.

Anderson, P., and M. L. Tushman. (2010). Technological discontinuities and dominant design: A cyclical model of technological change. *Administrative Science Quarterly* 35(2): 604 – 633.

Brownell, P. (2005). "Budgetary systems and the control of functionally differentiated organizational activities". *Journal of Accounting Research*, 23 (2): 502 – 512.

Burns, T., and M. Stalker. (2001). The management of innovation. London: Tavistock.

Chenhall, R. H. (2003). Management Control System Design within its Organizational context: Findings from Contingency Based Research and Direction for the future *Accounting, Organization and Society,* 28:127 – 167.

Choe. J., 2004. "The relationships among management accounting information, organizational learning and production performance" *The Journal of Strategic Information Systems*, 13 (1): 61 – 85.

Chong. V. K., and Chong, K. M., (1997). Strategic Choice, Environmental Uncertainty, and SBU Performance: A Note on the Intervening Role of Management Accounting Systems *Accounting and Business Research*, 27 (4): 268 – 276.

Cyert, R., and J. March. (2003). A Behavioral theory of the firm. Englewood Cliffs, N. J.: Prentice-hall.

Daft, R. L., (2010). Organization Theory and Design, Tenth Edition, South - Western Cengage Learning, Ohio, USA.

Davidson, P., Griffin, R., (2000). Management: Australia in a global context, Brisbane: John Wiley & Sons.

Duncan, R.B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly,* 17 (3): 313 – 327

Emery, F., and E. Trist (2005). The causal texture of organizational environments. *Human Relations* 18 (1): 49 – 63.

Emmanuel, c., Otely, D. and Merchant K. (1990). *Accounting for management control.* (2nd Ed.) London: Chapman & Hall.

Fahey, L., and V. K. Narayanan. (2006). *Macro environmental analysis for strategic management*. New York: West Publishing Company.

Ferris, K., Haskins, M., (2008) "Perspectives on accounting systems and human behaviour" *Accounting, Auditing and Accountability Journal*, 1 (2): 3 -18.

Fisher, J.m (1995), "contingency-based research on management control systems: Categorization by level of complexity." *Journal of Accounting Literature*, 14: 24 – 53.

Fredrickson, J. W. and T. R. Mitchell (2004). "Strategic decision processes: comprehensiveness and performance in an industry with an unstable environment". *Academy of Management Journal*, 27 (2):399 – 423.

Galbraith. J. R. (1977) Organization Design. Reading, MA: Addison - Wesley.

Gerdin . J. and Greve. J. (2004). Forms of contingency fit in management accounting research – A critical review. *Accounting, Organizations and Society,* 29: 303 – 326.

Gerdin. J. (2005). Management accounting system design in manufacturing departments: an empirical investigation using a multiple contingencies approach *Accounting Organizations and Society*, 30: 99 – 126.

Gibson, J. L., Ivancevich, J. M., Donnelly, J. H., and Konopaske, R., (2012). *Organization: Behavior, Structure Processes*, Fourteenth Edition, Mc Graw-Hill Irwin Companies, Inc., New York, USA.

Gordon, L. A. and Miller, D. (1976). A contingency framework for the design of accounting information systems. *Accounting, Organization and Society,* 1:59 – 69.

Gordon, L. A. and Narayanan, V. K. (1984). Management accounting systems, perceived environmental uncertainty and organization structure: An empirical investigation. *Accounting, Organizations and Society,* 9:33 – 47.

Gosselin, M., (2011). Contextual Factors Affecting the Development of Innovation Performance Measurement Systems *Journal of Applied Accounting Research*, 12 (3): 260 – 277.

Govindarajan. V., (1988). A contingency Approach to strategy Implementation At the Business – Unit Level: Integrating Administrative Mechanisms with Strategy, *Academy of Management Journal*, 31 (4): 828 – 853.

Gul, F., Chia, Y., (2014). "The effects of management accounting systems, perceived environmental uncertainty and decentralization on managerial performance: A test of three – way interaction,: Accounting, Organizations and Society, 19(4): 413 – 426.

Hoque, Z. (2004). Strategic Management Accounting: concepts, Process and Issues. Second Edition, Spiro Press. USA.

Hoque, Z., (2011). The Relations Among competition, Delegation, Management Accounting Changes and Performance: A Path Model, Advances in Accounting Incorporating *in Advances in International Accounting*, 27: 266-277.

Horngren. C. T., Datar, S.M., and Rajan M.V., (2012). *Cost Accounting: A Managerial Emphasis*, Fourteenth Edition, Pearson Education, Inc. New Jersey, USA.

Huber. G., (1980). Managerial decision making, Glenview, Illinois, USA: Scott Foresman Inc.

Inegbenebor, A. U. (1995), Size structure and Performance of private Nigerian manufacturing enterprise. In T. A. Ojo (Ed), *Management of small and medium scale enterprises in Nigeria* (pp. 80 -98). Lagos: Pumark Nigeria Ltd.

Islam. J., and Hu. H., (2012). A Review of Literature on Contingency Theory in Managerial Accounting African Journal of Business and Management, 6 (15): 5159 - 5164.

Ittner, C., Larcker, D., Randall, T., (2003). "Performance implications of strategic performance measurement in financial services firms" *Accounting, Organizations and Society,* 28(7-8): 715 – 741

Jermias, J. and Gani. L. (2008). Integrating business strategy, organizational configurations and management accounting systems with business unit effectiveness: *A fitness landscape approach, Management Accounting Research*, 15: 179 – 200.

Jones, C. S. (1985), An empirical study of the evidence for contingency theories of management accounting systems in conditions of rapid change. *Accounting, Organizations and Society,* 10: 303 – 328.

Khandwalla, P. N. (2007), The Effects of Different Types of Competition on the Use of Management Controls. $Journal \ of \ Accounting \ Research, \ 10(2): 275-285.$

Kreitner, R., (2009). Management, Eleventh Edition, Houghton Mifflin Harcourt Publishing Company, Boston, USA.

Langfield –smith, K., (2003). Management Control System and Strategy: A Critical Review, Accounting. *Organization and Society*, 22(2): 207 – 232.

Lawrence, P. R., and J. W. Lorch. (2011) Organization and Environment. Harvard University, Massachusetts, USA

Lindsay and Rue (1980). "Impact of the business environment on the long range planning process: a contingency view." *Academy of Management Journal*, 23: 385 -404.

Mat, T. Z. T., Smith, M., and Djajadiketa, H., (2010). Management Accounting and Organizational Change: An Exploratory Study in Malaysian Manufacturing Firms. *Journal of Applied Management Accounting Research* (JAMAR), 8(2):5180.

Mathews, C. H. and S. G. Scott (1995). "Uncertainty and planning in small and entrepreneurial Firms. *Journal of Small Business Management*, 33: 34 – 65.

Mia, L., Patiar, A., (2002). "The interactive effect of Superior – subordindate relationship and budget participation on managerial performance in the hotel industry: An exploratory study." *Journal of hospitality & Tourism Research*, 26(3): 235 – 257.

Miller, D. (2006). "Configurations of strategy and structure: towards a synthesis." *Strategic Management Journal*, 7: 233 – 249.

Miliken. F., I., (1987). Three Types of Perceived Environmental Uncertainty: State, Effect and Response Uncertainty. *Academy of Management Review*, 12(1): 133 – 143.

Moores, K., Booth, P., (1994). Strategic management accounting: Australasian cases, Brisbane: John Wiley and Sons.

Nimtrakoon, S., and Tayles, M. E., (2010). Contingency Factor of Management Accounting Practices in Thailand: A Selection Approach. *Asian Journal of Accounting and Governance*, 1: 51 – 78.

Otley. D.T., (1980). The Contingency Theory of Management Accounting: *Achievement and Prognosis. Accounting, Organization and Society*, 5 (4): 413 – 428.

Perera, S., Harrison, G., Poople, M., (1997). "Customer-focused manufacturing strategy and the use of operations – based non –financial performance measures: A research note." *Accounting, Organizations and Society, 22*(6): 557 – 572.

Pizzini, M.J. (2006). The relation between cost systems design, managers' evaluations of the relevance and usefulness of cost data and financial performance: An empirical study of US hospitals. *Accounting, Organizations and Society,* 31: 179 – 210.

Rasid, S. Z. A., Isa C. R., and Ismail, W. K. W., (2014). Management Accounting Systems, Enterprise Risk Management and Organizational Performance in Financial Institutions. *Asian Review of Accounting*, 22(2): 128 – 144.

Reid, G. C. and Smith, J. A. (2000). The impact of contingencies on management accounting system development. *Management Accounting Research*, 11: 427 – 450.

Riahi - Belkaoui, A., (2002). Behavioural Management Accounting, Quorum Books, Connecticut, USA.

Robbins S. P., and Judge, T. A., (2012). The Management Accounting Systems Change and Sub Unit Performance; *The Moderating Effects of Perceived Environmental Uncertainty, Organizational Behavior,* 15th Edition, Pearson Education, Inc. New Jersey, USA.

Robbins, S.P. and Coulter, M. (2005), Management (8th edition), Englewood Cliffs, NJ: Prentice Hall,

Ronny Andesto, (2012). The influence of perceived environmental uncertainty and business strategy on management accounting system: A survey on the Indonesia advertising companies. *Journal of Accounting, Auditing and Finance Research*, 4(3):27 – 36.

Sandalgaard, N., (2012), Uncertainty and Budgets: An empirical Investigation *Baltic Journal of Management*, 27:45-60.

Schulz, A. K. D., Wu, A., and Chow, C.W., (2010). Environmental Uncertainty, Comprehensive Performance Measurement Systems, Performance-Based Compensation, and Organizational Performance. *Asia-Pacific Journal of Accounting & Economics*, 17: 17 -40.

Seaman, A. E., and William, J. J., (2006). Management Accounting Systems Change and Sub Unit Performance: The Moderating Effects of Perceived Environmental Uncertainty. *Journal of Applied Business Research*, 22(1): 103 – 120.

Simon H. A, Guetzkow H, Kozmetsky G, Tyndall G (1954). *Centralization vs, decentralization in organizing the controller's department.* Controllership Foundation, New York.

Srinidhi, B. (2008). Strategic quality management. International Journal of Quality and Reliability of Management, 3(1): 38-70.