

THE BALANCED SCORECARD AS A PERFORMANCE MANAGEMENT TOOL FOR SMALL AND MEDIUM SCALE ENTERPRISES IN NIGERIA

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Abstract: *Most firms undermine the inclusion of non-financial variables in measuring performance. This attitude has led to wrong presentation of reports that do not represent “true and fair” view of the organization. This study uses the case study approach to examine the use of balanced scorecard by Small and Medium Scale Enterprises (SMEs) in Edo state, Nigeria. The study finds a positive statistical relationship between overall performance proxied by balanced scorecard (BSC) and the four perspective indicators (financial, customer, internal business process and learning & growth) of Kaplan and Norton (1986) model. In addition, the study established that the non-financial variables are the major drivers of the SMEs performance in Edo State. It is recommended that SMEs in Edo state should apply BSC model instead of depending only on the financial measurement tool.*

Keywords: *Balanced scorecard, Customers, Financial, Internal business process, Learning& growth*

1. INTRODUCTION

Small and Medium Scale Enterprises (SMEs) in both developed and developing countries are major employers of labour. SMEs have been described as “the engine of growth” and “catalysts for socio-economic transformation of most economies”. Although its definition varies from time to time and from country to country (Hill, 2001. Dalberg, 2011), there are however some definitions provided by some institutions that are taken as universal definitions. For instance, the World Bank defines SMEs as “enterprises with a maximum of 300 employees, \$15 million in annual revenue and \$15 million in assets, while Inter-American Development Bank describes SMEs as enterprises with a maximum of 100 employees and less than \$3 million in revenue (Dalberg, 2011).

A company’s performance is a function of its efficiency, productivity, formulation and application of correct policies, and also deployment of appropriate and proper strategies. The use of the term proper strategies in this regard, encompasses all other functions of company performance. Performance has been widely used in the literature to monitor, manage and measure the achievement of an organization at the end of a given period (Richard, Devinney, Yip & Johnson, 2009 and March & Sulton, 1997). However, most researchers only considered financial measures without including non-financial measures. Banker, Chang and Pizzini (2004) assert that relying only on financial measures would be problematic and subjective because non-financial measurements are major drivers of organizational performance. Zhu (2000) added that, in order to accommodate the different measures of performance, there is need to have a more reliable model instead of multi-factor model that captures only financial measures. The financial measures only assesses the past performance and ignore long term strategic performance which involves forward looking measures (Chakravarthy, 1986). To avert the challenges of reporting only financial performances, Kaplan and Norton (1996) propounded the balanced scorecards (BSC).

The balanced scorecard (BSC) is one of the strategic performance measurement system (SPMs) used to replace the traditional performance reporting approach that focuses only on financial measurement. It incorporates both financial and non-financial variables to measure performance. This can be achieved by converting organizational strategy into a set of financial (also known as lagging indicators) and non-financial measures (leading indicators) which drives the financial performance indicators (Kaplan & Norton, 1992). Several works have been done on the application of BSC on firm's performance assessment in developed countries like United States of America, Canada, New Zealand, and Great Britain among others (Chan & Chan, 2004). It has also been used extensively in large organizations because it was primarily designed to be used by medium or large sized enterprises (Hudson, Smart & Bonne, 2001; Johanson, Skoog, Backlund & Almqvist., 2006).

In the developing countries, there are few empirical evidence and scanty literature on studies of BSC that focuses on SMEs. The few available studies in Nigeria used large manufacturing firms and the deposit money banks (Ibrahim, 2015, Aminu, Ahmed & Montan, 2015, Ajibolade & Oyemo, 2017). This study intends to contribute to the few literatures that have applied BSC to measure the performance of SMEs in Nigeria. Olve, Petri, Roy and Roy (2004) stated that previous study avoids using the smaller firms because they do not have specialized and formalized management system. Studies show that most SMEs are not aware of BSC techniques and its usage is relatively low when compared to large organization (Tennant & Tanoren, 2005). This study will fill this gap of applying BSC performance measurement to SMEs in Edo state, Nigeria.

2. LITERATURE REVIEW

2.1An Overview of the BSC Model

The balanced scorecard is a performance measurement tool that translates visions or goals of an organization to financial rewards through appropriate strategy. It was developed by Kaplan and Norton (1996) as a strategic planning tool to find a solution to whether an organization actually exists only to satisfy stockholders. They demonstrated that the balanced scorecard translates company's mission and strategy with objectives through four perspectives-financial, customer, internal business process and learning & growth to achieve the organizational performance.

The financial dimension is majorly concerned with the tracking of financial indicators of measuring performance. It is mainly associated with accounting function. The measures used by Kaplan and Norton (1996) include ratios that capture liquidity, efficiency, capital structure, profitability and leverage of the firm. In this study, the questionnaire was designed to ascertain whether the SMEs is making huge profits and if shareholders are happy with such performance. Customer dimension of BSC tracks customer satisfaction, attitudes and market share. It is associated with marketing function of the organization. Emphasis of the firm is on how to attract new customers, satisfy them and retain them. In fact, to provide information on how to attract new business, keeping and making existing customers happy, and also to ascertain the performance position of the SMEs in the industry classification.

Moreover, the internal business process is applied to evaluate a company's condition and changes on it's internally processes in a given period of time. This can be associated with value chain. It takes into consideration the ability of a firm to develop new services and products and launch them into the market. This study captures the internal business process by requesting respondents to indicate how SMEs can adapt to changes in business environment and to get information on what their customers actually needed.

The final dimension which is Learning and growth emphasizes how changes and improvement in the organization can be sustained. This can be achieved with the availability of qualified human

resources. Its emphasis is on training and staff development. SMEs cannot achieve profitability if the employees are not satisfied and sustained.

2.2 Empirical Review

Hoque and James (2000) studied the impact of balanced scorecard on organization performance using 66 manufacturing firms in Australia. The study found out that bigger firms mostly used BSC more than the smaller firms. However, they concluded that there is a positive relationship between BSC usage and performance. In the same vein, Davis and Albright (2004) examined the effect of BSC on financial performance of banks branches in USA. They found out that branches that adopt the BSC performed better than branches that relied only on the financial indicators in measuring performance. They stated that in order for financial indicator to obtain maximum results, the non-financial perspectives must have been achieved. The study concluded that both the financial and non-financial measurements should be reflected in the overall performance. Also Ittner, Daraker and Randall (2011) opined that the combination of both financial and non-financial measurement is positively linked to returns performance on stocks in the market.

Fakhri, Menacare and Pegium (2011) carried out a study on the adoption and disclosure of BSC on 55 firms in the banking sector in Libya. The study found out that banks used non- financial and financial measures of BSC extensively. In the same vein, Paday (2005) carried out a study using a survey of managers and found that non-financial performance are more superior to financial measures in the performance of the banking sector. The study justified the superiority of non-financial performance by stating that it considers the strategic objectives of a firm which are driven by internal business process. The implication of this study is that banks that use only financial measurement are likely to have a window dressed report that had not capture all performance determinants. Anand, Sahay and Saha (2005) assert that firms prefer using BSC perspectives to measure performance and their preference in an ascending order of: internal business perspectives, learning & growth perspectives, Customer and then financial.

In Nigeria, Aminus, Ahmed and Moutari (2015) found that Nigerian deposit money banks do not consider non-financial measures in evaluating performance. They only voluntarily disclosed some non-financial performance measures. Also Ahmed, Bahamman and Ibrahim (2015), used a survey research design to study eleven (11) selected Nigerian deposit money banks in Gombe State. The study reveals that the banks used BSC to measure performance and from the results it shows that financial has a mean value of 15.650(high), customer with a mean of 13.80(average), while learning and growth has a mean value of 9.60(low), and the internal business process records a very low mean of 3.00. They concluded that banks focused more on financial and less emphasis on internal business process.

Ajibolade and Oyemo (2017) using a scale of 25 on the four BSC perspectives reported that the highest extent of disclosure was on financial having a mean of 19.01 and the lowest was on internal business process. The order of the extent of disclosure was financial, customer perspectives, learning & growth and internal business process mean values of 19.01, 15.00, 12.64 and 12.50 respectively. They concluded by reporting the aggregate value of the BSC model on performance at 59.15 from the maximum of 100.00.

3. METHODOLOGY

The study adopts a case study approach using the quantitative research design to establish whether SMEs in Edo state uses balanced scorecards. This method is suitable for this study since it involves a holistic and in-depth investigation (Feagin, Orua & Sjoberg, 1991). Structured

questionnaires administered on SMEs were used to obtain the relevant primary data needed for the analysis. Data obtained were analyzed using STATA 13.0.

The population of this study includes all SMEs in Edo state that are registered with Banks of Industry (BOI) and Small Medium Enterprises Development Agency of Nigeria (SMEDAN). As at 2017 the total population was 1,997. In line with Kerlinger (1986) the sample size would be 200 being 10 percent of the population. This study used the multi-stage sampling technique by selecting the numbers of the SME's from our sampled representatives in the three senatorial districts of Edo state.

The research question for this study is stated as: Does SMEs in Nigeria use BSC for performance evaluation? While the hypothesis of this study therefore is: SMEs in Nigeria do not use BSC for performance evaluation.

3.1 Model Specification.

The study adopts a regression model to establish which variable contributes more to overall performance of SMEs in Edo state using BSC model. The four dimensions of BSC are examined individually, and then the non-financial dimensions taken together as a group and finally the financial and non-financial dimensions combined. The functional forms of the models capturing these variables are stated first; followed by mathematical forms of the models.

$$\text{BSC} = f(\text{Learning \& Growth}) \dots\dots\dots \text{eqn 1a}$$

$$\text{BSC} = f(\text{Internal business Process}) \dots\dots \text{eqn 2a}$$

$$\text{BSC} = f(\text{Customer}) \dots\dots\dots \text{eqn 3a}$$

$$\text{BSC} = f(\text{Financial}) \dots\dots\dots \text{eqn 4a}$$

$$\text{BSC} = f(\text{Non-Financial}) \dots\dots\dots \text{eqn 5a}$$

$$\text{BSC} = f(\text{Financial, Non-Financial}) \dots\dots \text{eqn 6a}$$

Model 1: Business scorecard and Learning & Growth.

$$\text{BSC} = \alpha_0 + \beta_0 \text{LG} + E_t \dots\dots\dots \text{eqn 1b.}$$

Model 2: Business scorecard and Internal business Process .

$$\text{BSC} = \alpha_0 + \beta_0 \text{IBP} + E_t \dots\dots\dots \text{eqn 2b.}$$

Model 3: Business scorecard and Customer.

$$\text{BSC} = \alpha_0 + \beta_0 \text{ICUS} + E_t \dots\dots\dots \text{eqn 3b}$$

Model 4: Business scorecard and Financial.

$$\text{BSC} = \alpha_0 + \beta_0 \text{FIN} + E_t \dots\dots\dots \text{eqn 4b}$$

Model 5: Business scorecard and Non-Financial.

$$\text{BSC} = \alpha_0 + \beta_0 \text{NFIN} + E_t \dots\dots\dots \text{eqn 5b}$$

Model 6 : Business scorecard and Financial &Non-Financial.

$$\text{BSC} = \alpha_0 + \beta_0 \text{FIN} + \beta_1 \text{NFIN} + E_t \dots\dots\dots \text{eqn 6b}$$

Where LG= Learning & Growth

IBP = Internal business Process.

CUS= Customer

FIN=. Financial

NFIN= Non- Financial (LG+IBP+CUS)

BSC= Balanced Scorecard.

4. RESULTS AND DISCUSSION

The results of the descriptive statistics are presented to capture the mean, median, standard deviations and the correlation matrix as shown below:

4.1 Descriptive Statistics: The descriptive statistics on each independent variable and the overall performance is shown in Table 1.

TABLE 1 DESCRIPTIVE STATISTICS ON EACH INDEPENDENT VARIABLE AND OVERALL PERFORMANCE

Variable	Obs	Mean	Std. Dev.	Min	Max
-----+-----					
LG	200	3.6544	.3552614	2.98	4
IBP	200	3.64715	.3516471	2.98	4
CUS	200	3.64755	.3474219	2.98	4
FIN	200	3.70665	.3547896	2.98	4
NFIN	200	3.6497	.1945538	2.996667	3.99
-----+-----					
BSC	200	18.32287	.8188337	15.60667	19.72333

Source: Authors computation from STATA 13.0 (2018).

Table 1 indicates the average mean scores of the variables used for this study. From the table average mean from the highest to the lowest are as follow: FIN ((3.7065), LG (3.6544), NFIN (3.6497), CUS (3.6476) and IBP (3.6472). This results support the previous works of Anand, Sahay and Sahas (2005), Ahmed, Bahaamman and Ibrahim (2015) and Ajiboladen and Oyewo (2017) conducted in the banking sector. However, this study results varies in the order of preference as against the previous, for instance in the banking sector, it ranges in this order- Financial, Customer, learning& growth and internal business process. The result of this study is justifiable since the SMEs are interested in developing new products and to render services while the deposit money banks are mainly for rendering of services.

4.2 Correlation matrix

The correlation matrix in Table 2 indicates that overall performance BSC have positive relationship with the four key perspectives (Learning & growth (LG), Internal business process (IBP), Customer (CUS) and Financial (FIN). In line with Dimitrious and Hall (2007), the results is free from the presence of multicollinearity among variables since none of the variables coefficient exceeded 0.90. Based on the above, the data extracted from the respondents can be relied upon to run further analysis.

TABLE 2 CORRELATION MATRIX

	LG	IBP	CUS	FIN	NFIN	BSC
-----+-----						
LG	1.0000					
IBP	-0.1375	1.0000				
CUS	0.0844	-0.0671	1.0000			
FIN	-0.1512	-0.0811	0.0457	1.0000		
NFIN	0.5761	0.4788	0.6062	-0.1137	1.0000	
BSC	0.3156	0.4281	0.5903	0.4916	0.8014	1.0000

Source: Authors computation from STATA 13.0 (2018).

4.3 Interpretations of regression results

BSC and Non-financial Performance

From the summary of the regression result extracted from STATA 13.0 as presented in Appendix 1 shows that the coefficient of the combined non-financial variables (NFIN) is 3.372975 and it is positive implying that non-financial measures can explain overall performance. This coefficient is statistically significant at the 1% level judging from the probability value of the t-statistic. Hereby the explanatory power of the non-financial measures is highly significant. The result also reported the R^2 (coefficient of determination) and Adjusted R^2 values. It reports 64.05% as adjusted R^2 , which implies that the financial can only account for the balance 35.95% of the BSC. The implication of this finding indicates that SMEs in Edo state uses BSC and the overall performance is more driven by the non-financial than the financial performance. This finding supports the works of Banker et al (2004) and Paday (2005) stating that non-financial performances are more superior to financial performance.

BSC and financial Performance.

Appendix 1 presents the regression results for BSC and financial performance of the SMEs. The results show a positive significant statistical relationship between BSC and financial performance. Although its contributions to BSC as shown by the adjusted R^2 is 23.78% implying that about 23.78% of the systematic variations in BSC of the selected SMEs in Edo state of Nigeria can be explained by financial measures. The t-value of the parameter estimates is significant at 1% as shown by the probability value. Clearly BSC is significantly affected by financial variable.

BSC and the four perspective measurements of performance.

A positive relationship exists between BSC and Learning & Growth, Internal business process, customer and Financial as shown in Appendix 1. The highest coefficient is on customer (1.391283) and lowest is learning & growth. The implication of this study shows that if SMEs should concentrate more on customers it will impact more on the growth of the firm and BSC.

R^2 and adjusted R^2 establishes the behavior of performance by regressing balanced scorecard against non-financial variables and financial variables.

BSC Vs financial and non-financial performance

TABLE 3

Source	SS	df	MS	Number of obs = 200			
-----+-----				F(2, 197) = 7029.98			
Model	131.583562	2	65.7917811	Prob > F = 0.0000			
Residual	1.84367338	197	.009358748	R-squared = 0.9862			
-----+-----				Adj R-squared = 0.9860			
Total	133.427236	199	.670488621	Root MSE = .09674			

BSC	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
-----+-----							
FIN	1.362308	.0194552	70.02	0.000	1.323941	1.400675	
NFIN	3.655341	.0354786	103.03	0.000	3.585374	3.725307	
_cons	-.0676285	.1553591	-0.44	0.664	-.3740089	.2387519	

Source: Authors computation from STATA 13.0 (2018).

As shown in Table 5, customers had the highest adjusted R^2 of 34.52%. The implication of this study is if SMEs had considered only financial performance, its contribution would have been so insignificant at 23.78%. This might account for why researchers conclude that the SMEs in Nigeria

had not grown to expectations, especially when non-financial variables are willfully excluded. In order to establish if firms comply with the BSC model, the study consider a relationship between the overall performance and combination of financial and non-financial variables as shown in Table 3. It reports a more robust adjusted R^2 of 98.60%. The F-statistics test result ((F (2,197) =7029.98), Prob>0.0000) statistically shows that FIN and NFIN have a significant influence on BSC. In complying with the rule of thumb the reported probability is less than the conventional probability of 5% level of significance. This suggests that the use of BSC produces better results than when regressed separately against only financial or non-financial performance. This finding is consistent with the works of Banker et al (2004) and Davis and Albright (2004).

5. CONCLUSION

The balanced scorecard model developed by Kaplan and Newton (1996) had been adopted by researchers in studying small firms, large firms, firms in developed and developing countries. This study demonstrates that balanced scorecard has a statistical significant positive relationship with organization performance. From the sampled results, the non- financial variables are the major drivers of BSC of SMEs in Edo state when compared to financial variables as their contribution are 64.05% and 23.78% respectively.

In line with the above findings SMEs that relied only on financial performances would not survive in a competitive environment. The study recommends that SMEs in Nigeria should embrace BSC since it captures both financial and non-financial performance. SMEs should concentrate more on the non-financial performance being the major driver of the BSC. The study covers only 200 SMEs due to cost of gathering data from the total population of the study. Further studies should increase the scope of the study and use secondary data to capture financial data instead of the primary sources used by this study.

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APPENDIX 1: Regression results of BSC and LG, IBP, CUS, FIN, NFIN & FIN

	LG	IBP	CUS	FIN	NFIN
Coefficient	0.7273717	0.996954	1.391283	1.134483	3.372975
R-Squared	0.0996	0.1833	0.3485	0.2416	0.6423
Adj R-Squared	0.0950	0.1793	0.3452	0.2378	0.6405
F-Statistics	F(1,198)=21.90	F(1,198)=44.44	F(1,198)=105.90	F(1,198)=63.09	F(1,198)=355.48
t-Statistics	4.68	6.67	10.29	7.94	18.85
P-Statistics	Prob>F0.0000	Prob>F0.0000	Prob > F0.0000	Prob>F0.0000	Prob>F0.0000

Source: Authors computation from STATA 13.0 (2018).